FLEET OPERATORS' REFERENCE ANNUAL

COMMERCIAL CAR JOURNAL

THE MAGAZINE FOR FLEET OPERATORS

APRIL 1946

For Today's Big Building Job . . . STANDARDIZE ON REO

Deep-rooted in this Twentieth Century, Reo has borne its share of the heavy hauling load. The massive frames of the new Reos—cold-riveted for extra strength—the sturdy axles, springs and wheels are engineered for today's big building job. The powerful, precision-built engines are designed to deliver loads swiftly and at low cost. Also of interest to all truck operators is Reo More-Load design which provides more load space on shorter wheelbase, with balanced weight distribution and shorter turning radius. Reo is *all truck* in every part and every dimension. Get the facts and you'll standardize on Reo equipment, which is now being sold and serviced through a nation-wide organization of distributors, dealers and factory-operated branches. REO MOTORS, INC., Lansing 20, Mich.

REO

1904 • AMERICA'S TOUGHEST TRUCK • 1946

"Brother, you've got what it takes!"

IT TAKES *power*, and he *has* it . . . *plenty* of power . . . for the hills ahead and the load behind.

His truck is a Dodge *Job-Rated* truck . . . with a *Job-Rated* engine to match the loads he hauls . . . an *economical* engine, quality-designed and precision-built to deliver its power at lowest cost.

To support the load, his truck has a *Job-Rated* frame . . . and *Job-Rated* springs, axles and tires. Clutch, transmission, brakes . . . all are *Job-Rated*. They *fit the job* for *maximum* performance, economy, safety, and long life.

Today, more and more truck users are learning that the easy way to make a sound truck investment is to see their Dodge dealer *first* . . . for Dodge *Job-Rated* trucks that match their hauling jobs.

DODGE DIVISION OF CHRYSLER CORPORATION

Eleven Standard Stake Trucks Now Available!

¾-ton . . . Wheelbase, 120″. Body, 7½′ x 7′. 95 H.P. engine.

1-ton . . . Wheelbases, 120″ and 133″. Bodies, 7½′ x 7′ *and* 9′ x 7′. 105 H.P. engine.

1½-ton . . . Wheelbases, 135 5/16″ and 160″. (C.O.E. models—105″ and 129″). Bodies, 9′ x 7′4″ *and* 12′ x 7′4″. 115 H.P. engine.

2-ton . . . Wheelbases, 136″ and 160″. (C.O.E. models —105″ and 129″). Bodies, 9′ x 7′4″ *and* 12′ x 7′4″. 120 H.P. engine.

Trucks for 95% of All Hauling Needs—Dodge *Job-Rated* trucks include panels, pick-ups, stakes, tractors, and a wide range of chassis and cab models. See your Dodge dealer now. Save with trucks that *fit your job*.

LISTEN TO THE MUSIC OF ANDRE KOSTELANETZ
WITH GUEST STARS, THURSDAYS, C.B.S., 9 P.M., E.T.

DODGE *Job-Rated* TRUCKS
FIT THE JOB . . . LAST LONGER

COMMERCIAL CAR JOURNAL

with which is combined Operation & Maintenance
Reg. U. S. Pat. Off.
Acceptance under the Act of June 5, 1934, authorized December 18, 1934
Published monthly
Member C.C.A.

Vol. LXXI Philadelphia, April, 1946 No. 2

JULIAN CHASE, Vice-Pres. and Directing Editor
GEORGE T. HOOK, Editor
A. W. GREENE, Managing Editor
CHARLES B. RAWSON, Assistant Editor
M. K. SIMKINS, Technical Editor
JOSEPH GESCHELIN, Detroit Technical Editor
LEONARD WESTRATE, Detroit News Editor
MARCUS AINSWORTH, Statistician
HOWARD KOHLBRENNER, Art Director
L. W. MOFFETT, EUGENE J. HARDY, KARL RANNELLS
Washington News Editors

EDITORIAL CONTENTS

Copyright 1946 by Chilton Company (Inc.)

1946 Fleet Operators' Reference Annual
Index on Page 35

FEATURE ARTICLES

Statistical Study of Truck Transportation..... 83
1946 Studebaker Trucks Feature Comfort and Safety... 110
Cab Conditioning System for All-Weather Operation... 112
Mercury Truck Introduced in Canada..... 154
Linn Delivery Coach has Front Drive, Low Floor..... 192
Supercargo Trailers in Production..... 196
Home-Made Manifold Speeds Tank Draining..... 204
Standards for Highways of the Future..... 216
Mack Mono-Shift Permits Gear Pre-Selection..... 220
British Tilting Cab Boon to C.O.E.'s..... 228
Variable-Pitch Fan Assures Even Heat..... 232
Clark Truckloaders Save 75% Loading Time..... 234

DEPARTMENTS

Truck Specifications Table 77
CCJ Detroit Dispatch 98
CCJ Quiz 100
Laugh it Off 102
Washington Runaround 104
Free Publications 106
New Products 107
CCJ Newcast 118
Introducing 132

Automotive Division
G. C. BUZBY, President and Manager
E. W. HEVNER, Cir. Mgr. E. H. MILLER, Adv. Mgr.

OFFICES
Philadelphia 39, Pa.—Chestnut & 56th Sts., Phone Sherwood 1424
New York 17, N. Y.—100 E. 42nd St., Phone Murray Hill 5-8600
Chicago 1, Ill.—Rm. 916 London Guar. & Accident Bldg., Ph. Franklin 4243
Detroit 2, Mich.—1015 Stephenson Bldg., Phone Madison 2090
Cleveland 14, Ohio—1030 Guardian Bldg., Phone Cherry 4188
Washington 4, D. C.—1061 National Press Bldg., Phone District 8110
San Francisco 5, Cal.—605 Market St., Rm. 708, Phone Douglas 0967
Los Angeles 1, Calif.—6000 Miramonte Blvd., Phone Lafayette 5525

SUBSCRIPTION RATES: United States and United States Possessions and all Latin-American countries—$2.00 per year. Canada and Foreign—$3.00 per year. Single copies—25 cents. April issue, $1.00.

Owned and Published by
CHILTON COMPANY (INC.)
Executive Offices
Chestnut and 56th Streets, Philadelphia 39, Pa., U. S. A.

Officers and Directors
JOS. S. HILDRETH, *President*
Vice-Presidents
GEO. H. GRIFFITHS EVERIT B. TERHUNE J. H. VAN DEVENTER
C. S. BAUR P. M. FAHRENDORF JULIAN CHASE
WILLIAM A. BARBER, *Treasurer* JOHN BLAIR MOFFETT, *Secretary*
THOMAS L. KANE G. C. BUZBY HARRY V. DUFFY
CHARLES J. HEALE

WILLIAM H. VALLAR, *Asst. Treas.*

PAUL WOOTON, *Washington Member of the Editorial Board*

(Above) Unloading lumber quickly and safely with the St.Paul DUMP IT Hoist.

(Below) Dumping is fastest, gentlest way to handle pea vines.

In INDUSTRIES, on FARMS . . .

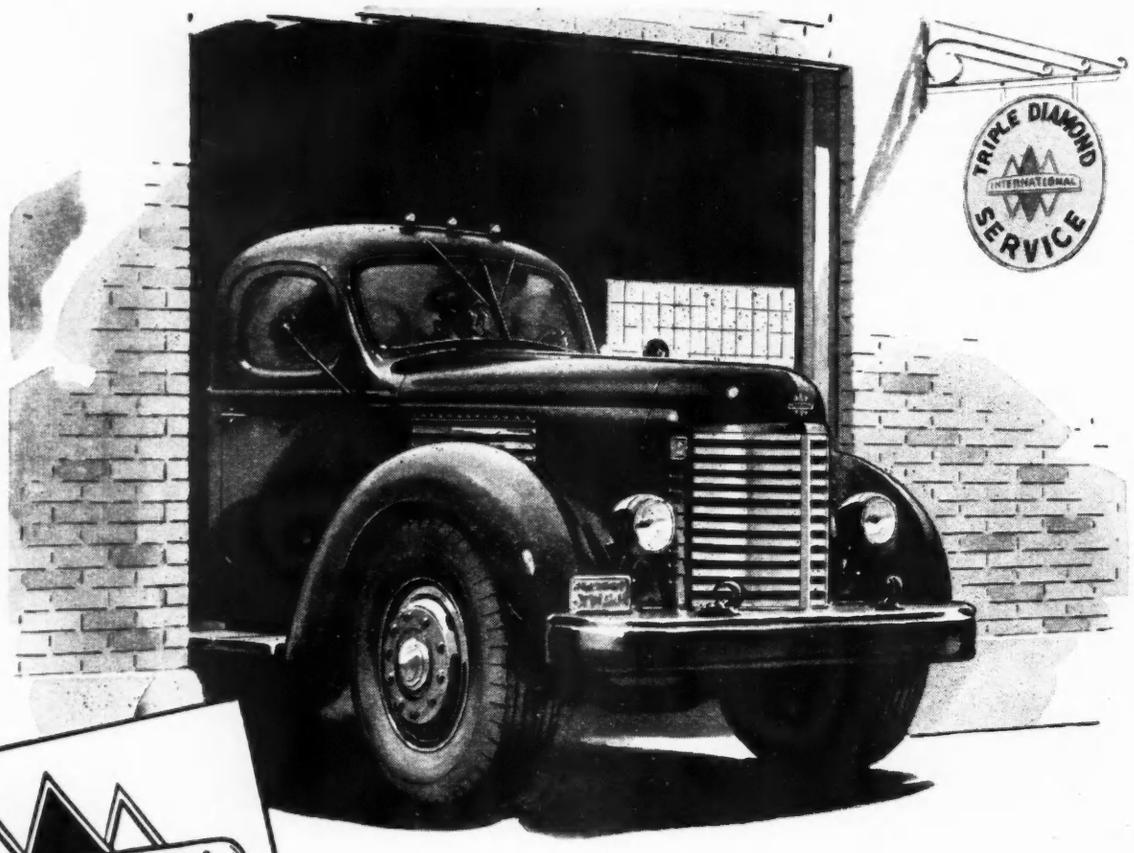
St.Paul's New *Dump* IT Hoist

SAVES TIME AND MONEY!

Dumping **is the modern way to unload truck platform bodies. Lumber, farm produce, castings, loads of all kinds are handled quicker and more profitably with the St.Paul DUMP IT Hoist.**

Because of current material shortages we suggest you plan your purchase as far ahead as possible.

ST.PAUL HYDRAULIC HOIST COMPANY
2207 University Avenue S. E.
MINNEAPOLIS 14, MINNESOTA



INTERNATIONAL

This emblem identifies the nation's largest company-owned truck-service organization—International Branches—and International Truck Dealers everywhere.

5 Reasons Why
INTERNATIONAL SERVICE
Can Help You Meet Rising Truck Operating Costs

1. Mechanics who furnish International Service are *truck* mechanics—specialists in truck service.

2. They are trained in International shop methods.

3. They are kept constantly informed of all improvements in maintenance and service practices.

4. They use International-approved equipment for analysis and testing.

5. They install International factory-engineered parts.

International Truck Service is supplied by a national network of International Truck Dealers and by International Branches—the nation's largest company-owned truck-service organization. It is available for trucks of all makes and models.

In the present critical truck situation, International Truck Service is your best bet to keep operating costs at practical levels and to minimize chances of highway failures. You will find an International Branch or Truck Dealer within easy driving distance. Get in touch with him today.

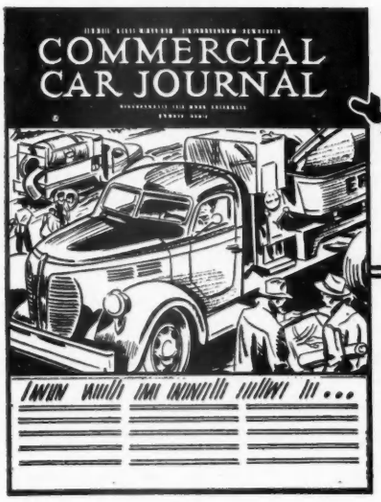
Motor Truck Division
INTERNATIONAL HARVESTER COMPANY
180 North Michigan Avenue Chicago 1, Illinois

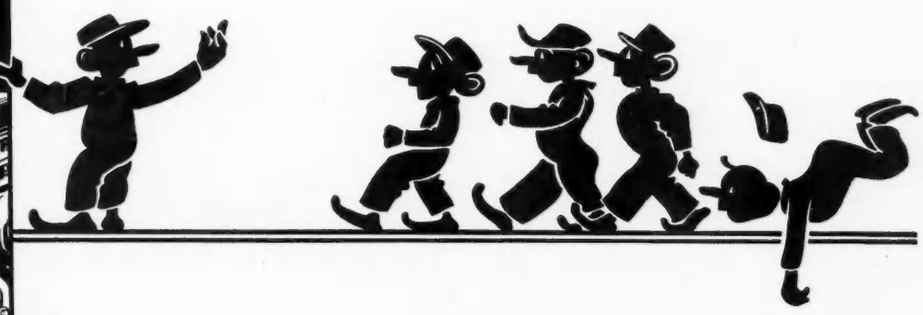
Listen to "Harvest of Stars" every Sunday. NBC Network

INTERNATIONAL

INTERNATIONAL *Trucks*

1946 FLEET OPERATORS' REFERENCE ANNUAL





THIS is the tenth anniversary of the Fleet Operators' Reference Annual. It finds the world at peace; the war an unpleasant memory. But war or peace the maintenance problems of fleet operators keep up an unceasing pressure. In this period of transition from wartime to peacetime conditions, there is still not complete relief from parts and equipment shortages. The manpower problem still presents its headaches. To help with the problems and the headaches, this reference issue is specially devised. At right is an index to the maintenance material, which has been compiled with the help of factory service departments, and to other material dealing with operation and selection. It is authoritative material and its use by fleet shops will contribute to efficient motor truck operation.

MAINTENANCE

Axle Wear Limits	44
Battery Data	50
Bearing Wear Limits	44
Brake Wear Limits	44
Clutch Wear Limits	45
Cooling System Capacities	46
Diesel Engine Specifications	70
Engine Lubricant Capacities	46
Engine Lubrication Specifications	51
Engine Service Specifications	54
Front-End Alignment Specifications	64
Gasoline Engine Specifications	71
Lubricant Capacities	46
Lubrication Specifications	51
Piston Ring Groove Wear Limits	45
Rear Axle Lubricant Capacities	46
Rear Axle Lubrication Specifications	51
Tire Maintenance	40
Steering Gear Lubrication Specifications	51
Tension Specifications	67
Transmission Lubricant Capacities	46
Transmission Lubrication Specifications	51
Tune-up Specifications	54
Valve Spring Pressures	68
Valve Spring Wear Limits	45
Wear Limits	44

OPERATION

Transportation Engineering Data	70
State Size & Weight Limits	72
Safety Equipment Regulations	75

SELECTION

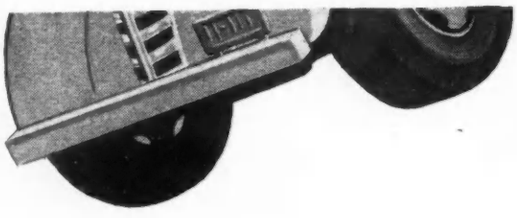
1946 New Truck Specifications	77
Picking the Right Truck for the Job	36
Third Axle Specifications	76
Transportation Engineering Data	70

STATISTICS

Truck Production Statistics	94
Truck Registration Statistics	96
Truck Transportation Study	83

.....AND **The regular monthly departments dispensing information of interest and value to fleet operators . . . The "Detroit Dispatch" on Page 98, which keeps you up to date on doings in the automotive capital . . . The "Washington Runaround" on Page 104, which reports events of fleet interest from the national capital . . . "Free Publications", with some choice offerings, is on Page 106, "New Products" descriptions start on Page 107 and the customary Free Postcard will be found between those two departments . . . "Laugh It Off" is on Page 102, the "CCJ Quiz" on Page 100, and the "Quiz Cartoons" start on Page 140**

Picking the Right Motor Truck for



WHAT are the steps to be taken to reach a correct analysis of a transport operation—and by that we mean any trucking operation, whether for-hire or private carrier? What will provide the basic information for properly specifying equipment?

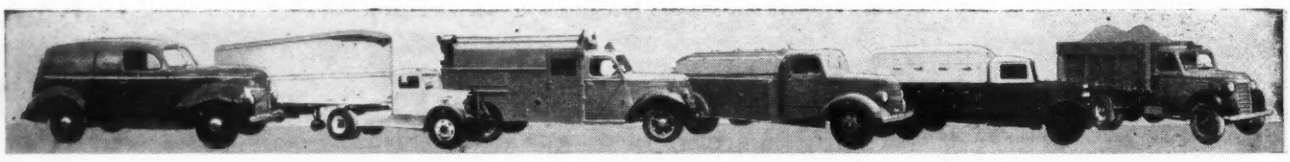
First of all, a careful time study of the proposed operation itself must be made. The nature of the commodity, its weight and bulk, and the quantity to be moved—either per trip, per hour, per day, or otherwise. The frequency of the trips must also be definitely ascertained.

Without this preliminary time study of the work to be accomplished there is nothing tangible on which to base the study of the equipment that must be used in order to accomplish the work. This will indicate the type and size of the body which of course must be definitely ascertained before any consideration can be given to the chassis required.

An accurate check as to the nature of the roads to be traveled, the hills to be climbed, the traffic conditions, and the number of stops and starts, with the estimated time lost in loading and unloading, is of vital importance.

The next step is a check-up and summarization of the restrictions imposed upon dimensions and weights of various types of equipment by the various state laws through which the operation must proceed. It frequently occurs that the logical equipment (from the standpoint of lowest cost per unit hauled, or per mile traveled) cannot be operated because of these restrictions.

State Law interpretations for every state in the Union are available from the National Highway User's Conference, in the National Press Building, Washington, D. C., and consist of three books:



Selection should be based on study of operation requirements, with due consideration for load distribution, safety, truck or trailer types and performance ability

SPEED INCOMPATIBLE WITH PULLING ABILITY

"Performance ability is a much cussed and discussed subject . . . One large fleet operator in the east, as a purchasing requirement, specifies 3 per cent grade ability in direct gear but does not specify road speed.

"Calculation of performance ability is not difficult if one understands the relation of the various factors involved . . . if increased speed is desired, a sacrifice of pulling ability is necessary; while to increase pulling ability, speed must be sacrificed."

the Job

by FRED B. LAUTZENHISER
Chief Transportation Engineer
International Harvester Co.

L-1-B—"State Restrictions on Motor Vehicle Sizes and Weights."

L-2-B—"Registration Fees and Special Taxes for Motor Vehicles."

L-3-B—"Equipment Requirements for Motor Vehicles."

LOAD DISTRIBUTION

PROPER load distribution is a vital efficiency and safety factor and is a comparatively simple matter to calculate. The same basic procedure is followed regardless of whether a four-wheel truck, a six-wheel truck or a tractor and semi-trailer is involved. The important dimension to bear in mind is the distance from the load center back to the truck rear axle. On a straight truck this will be the vertical center of a body and its load and on a tractor-truck it will be the vertical center of a fifth wheel. For a given wheelbase the load center should be located at the same point. Dividing this dimension by the wheelbase will give the per cent of body and payload, or of fifth wheel load carried on the tractor front axle.

Not only will this accomplish the same proportionate increase in payload, the tractor-semi-trailer train actually becomes more maneuverable and responds more readily to steering both forward and backward. Tire wear is more nearly uniform because of the approach toward equalized loads. Appearance of the train is also greatly enhanced.

Another important factor in proper fifth wheel mounting location is that of safety in hilly or mountainous country. No particular difficulty will likely be experienced from this standpoint on level roads, with the load center directly over the tractor axle, as the load imposed on the driving wheels will assure sufficient traction and sufficient weight being carried on the front wheels to provide good steering control. However, in rough and hilly country, when climbing, the load center is transferred to a point back of the tractor driving axle with a tendency, through this apparent leverage, to raise the tractor front wheels off the road. This frequent loss of steering control, aggravated by each inequality or bump in the road encountered by the front wheels, is positively dangerous. With the fifth wheel and the load center well ahead of the driving axle the hazard is entirely avoided as the load thrust falls

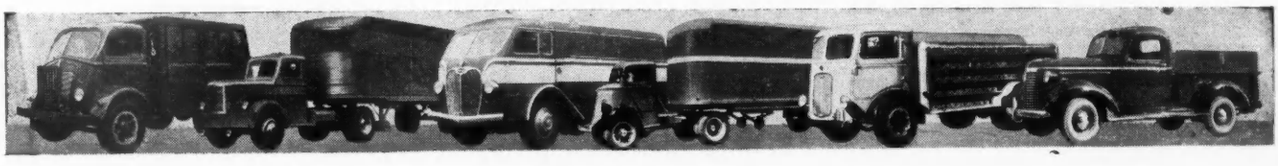
ahead of the driving axle and thus holds the steering road wheels firmly to the road bed.

Another danger inherent with incorrect location of the fifth wheel load center is that evidenced on slippery and crooked roads. Naturally, at other than very low speeds, the momentum of the trailer has a tendency to push the rear end of the tractor off the road when on a sharp turn and especially so if the road is wet or covered with ice or snow. With the fifth wheel mounted over the tractor rear axle, there is only the resistance of the tractor rear wheels to prevent. With the fifth wheel well ahead of the tractor axle, the thrust comes at a point on the tractor between the axles, and the additional resistance of the front wheels is thus provided.

6-WHEELERS VS. TRACTOR-SEMI-TRAILERS

THERE is a distinct field for both the tractor semi-trailer combination and for the six-wheel straight truck, although they do overlap to a certain extent. Generally speaking, where usable, the six-wheel truck is less hazardous to

(TURN TO NEXT PAGE, PLEASE)



Picking the Right Truck . . .

(Continued from page 37)

operate because, not being hinged in the middle, it cannot "jack-knife" like the combination. For the long highway haul, where maneuverability is not an important factor, the rigid six-wheeler is generally more desirable because less equipment weight is involved, thus permitting more payload. For the dump truck of large capacity and for the operation requiring maximum "flotation," the rigid six-wheel truck is generally far superior to the articulated unit.

Where maximum traction or driving wheel contact with the roadway is required, the 6 x 4 type of rigid six-wheeler is far superior to the tractor semi-trailer combination.

Some states allow additional weight or credit for additional axles under either the rigid unit or under the articulated unit, some only for one type or the other and some not at all.

In shuttle operation the tractor and semi-trailer really find their important economical use. In such an operation one tractor can accommodate from two to five semi-trailers or can be used to transport any one of a large fleet of semi's to and from the warehouse or other loading docks. Frequently, we find the tractor enroute pulling one loaded semi-trailer between two points, at one of which the second semi is being loaded while at the other the third semi is being unloaded. Such an operation is highly economical over that in which three expensive powered motive units would be used with two of them standing idle approximately two-thirds of the time.

The tractor semi-trailer combination also presents a somewhat simpler problem from the service angle from the standpoint of accessibility and ease of handling in the shop. The semi-trailer with its body is simply cut loose outside while the straight truck must be taken into the shop, body and all, thus requiring considerable more parking and garaging space and somewhat less accessibility for servicing of various units other than the power plant itself.

Another outstanding advantage of the semi-trailer combination over the rigid six-wheeler lies in its superior maneuverability. A tractor semi-trailer combination with a long body can be maneuvered in much less space, in turning around, in alleys and around loading platforms than is possible for a long wheelbase straight truck with the same length body.

These two types of six-wheel units should not be considered as competitors of each other because there is a distinct field of use for each and, properly selected, they do fit their jobs.

For unusual operations such as heavy logging and oil field work where the maximum carrying capacity, flotation and traction are involved, and for heavy highway transport operations where state laws permit additional load for additional axles, we find combinations of these two types—six-wheel tractors entrained with tandem axle semi-trailers. Such equipment may handle loads up to 75 tons or more in regular day-after-day operations — as much or more than many railroad freight cars can handle.

Regardless of the type of equipment, whether a four-wheel truck, a six-wheel truck of either the 6 x 2 or the 6 x 4 type, a tractor semi-trailer, or other combination, correct load distribution is highly important. Among the benefits to be derived are:

Increased payload.
Better maneuverability.
Less hazardous operation.
Uniform and longer tire life.
Better balance and longer mechanical life.
Lower operation cost.
Better appearance.
Better investment from every standpoint.

EXAMPLES OF INEFFICIENT TRANSPORTATION THAT CAN BE FOUND ON HIGHWAYS

A bold statement to the effect that "there are comparatively few truly efficient transport operations on the highway today" would be hard to believe and could easily start a lot of arguments. Nevertheless, I believe this statement to be fairly accurate and supportable.

To list but a few examples, we find—

(a) Tractor and semi-trailer combinations in use where a straight truck, either 4 or 6-wheel should be used.
(b) Straight trucks, either 4 or 6-wheel, where a tractor and semi-trailer should be used.
(c) 4-wheel trucks where 6-wheel units should be used.
(d) 4-wheel tractors and single axle semi-trailers where 6-wheel tractors and tandem axle semi's should be used.
(e) Trucks and full trailers where tractors and semi's should be used.
(f) Underpowered equipment. Overloaded.
(g) Under capacity equipment. Overloaded.
(h) Incorrect or insufficient gear reductions.
(i) Insufficient top road speed.
(j) Incorrect load distribution—body too long or too short on straight truck.
(k) Incorrect load distribution of tractor and semi-trailer combination—fifth wheel improperly located on tractor and trailer axle improperly located at rear end.
(l) Many, many others, too numerous to mention.

PERFORMANCE ABILITY

PERFORMANCE ability is a much cussed and discussed subject. At one time one state had a law on its books requiring any fully loaded vehicle or combination to be capable of climbing a 4 per cent grade at a minimum speed of 20 m.p.h. California once endeavored to enact legislation requiring 6 per cent grade ability at 20 m.p.h. Imagine what would happen. Only passenger cars and pickup trucks could meet such a requirement.

One large fleet operator in the east,

as a purchasing requirement, specifies 3 per cent grade ability in direct gear, but does not specify road speed.

Calculation of performance ability is not difficult if one understands the relation of the various factors involved. The old saying "you can't have your cake and also eat it" applies to performance. With a given unit, if increased speed is desired a sacrifice of pulling ability is necessary; while to increase pulling ability, speed must be sacrificed.

Having in mind the fact that vehicle movement is dependent upon the development of sufficient tractive effort by the vehicle to overcome the tractive resistance set up by the nature of the road, the magnitude of grades and that of wind or air, it is therefore necessary to check the tractive effort available against the tractive resistance opposing.

Generally, an average level, hard-surfaced road presents from 20 to 30 lb. of tractive resistance for each ton of gross vehicle or train weight to be moved, and in addition another 20 lb. for each gross ton for each per cent of grade to be climbed. Wind resistance is a wide variable, changing with the speed of the vehicle or with the intensity of the wind. For ordinary purposes wind resistance can be, and is generally, ignored because sufficient safety factor is already incorporated in the road resistance and the mechanical efficiency values to compensate for it.

As an example of tractive resistance: 20 tons of gross vehicle weight on a 30-lb. road, climbing a 4 per cent grade, present:

20 tons @ 30 lb. per ton = 600 lb. road resistance.

20 tons @ 20 lb. per ton = 400 lb. for 1 per cent grade.

400 lb. times 4 per cent grade = 1600 lb. for 4 per cent grade.

Therefore, the total tractive resistance is 600 lb. of road resistance plus 1600 lb. of grade resistance, or a total of 2200 lb.

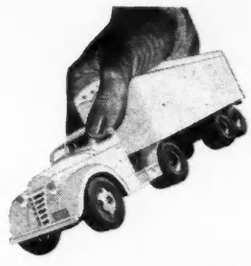
In order to move the vehicle or train on a 30 lb. road, up a 4 per cent grade, we must, of necessity, have at least 2200 lb. of tractive effort available.

Without delving too much into the various details nor the origin of certain factors, mathematical formulas for calculation of "tractive effort," "grade ability," "road speed," etc., are submitted in the accompanying table. For practical purposes they will be found entirely safe and adequate.

By use of these basic mathematical formulas and the occasional necessary transposition of them, provided we know the values of the variable factors involved, we can quite accurately forecast the performance ability of any make, type or size of motor vehicle, at any engine or road speed.

Naturally, if we compute the maximum grade ability of a vehicle, we must of necessity use the maximum torque output of the engine which occurs at a relatively low r.p.m. Therefore, when computing the road speed at which the vehicle can climb such a grade, the corresponding engine r.p.m. at which the maximu mengine torque is developed must be used.

On the other hand, if we compute the maximum road speed, the maximum engine r.p.m. must be used as the value of "S" and to compute the grade ability at that road speed it is necessary to use the torque ("T") value developed at such engine r.p.m. This can only be determined by reference to the power curve for the engine in question.



Formulas for Calculating Variable Factors

The following constant values and symbols representing variable values are used in all formulas when:

TA = Tractive Effort Available in Pounds for Total Gross Involved.
TR = Tractive Effort Required in Pounds for Total Gross Involved.
RR = Road or Rolling Resistance (Pounds Per Ton of Gross Weight).
20 = Grade Resistance, 20 lbs. for each Ton of Gross for each 1% of grade.
GR = Grade Required to be Climbed.
GA = Grade Ability in Terms of %.
T = Torque output of engine in lb.-ft. (at designated speed).
12 = Inches in 1 foot (constant).
R = Total Gear Reduction, Engine to Driving Wheels (may be that of driving axle only, or of axle combined with transmission, etc.).
E = Mechanical Efficiency. (Generally assumed to be 90% for direct and 85% or less for lower reductions involving additional gear contacts).
GWT = Gross Vehicle or Train Weight in Tons.
GW = Gross Vehicle or Train Weight in Pounds.
r = Tire Radius Under Load in Inches.
0.015 = Road Resistance in Pounds per Pound of Gross for 30-lb. road.
100 = For reducing to Terms of Grade %.
S = Engine Speed in Revolutions per Minute (r.p.m.)
d = Tire Diameter Loaded (2 x r) in inches.
m.p.h. = Miles per Hour.
336 = Constant Value Resulting From Cancellation of "Minutes in 1 hour," "Feet in 1 Mile," "Calculation of Circumference of Circle," etc.
Then:

$$TR = (GWT \times RR) + (GWT \times 20 \times GR) = \text{Pounds}$$

$$TA = \frac{T \times 12 \times R \times E}{r} = \text{Pounds}$$

$$GA = \left\{\frac{T \times 12 \times R \times E}{GW \times r} - 0.015\right\} 100 = \%$$

$$\text{Road Speed} = \frac{S \times D}{R \times 336} = \text{m.p.h.}$$

A simple example of transposition of the mathematical formula is illustrated as follows:

$$\text{Road speed} = \frac{S \times d}{R \times 336} = \text{m.p.h.}$$

If we know the miles per hour at which the vehicle must travel and wish to determine the engine r.p.m. corresponding to that road speed, we simply transpose the formula to read,

$$S = \frac{\text{m.p.h.} \times R \times 336}{d} = \text{Engine r.p.m.}$$

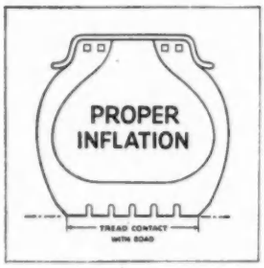
Or if we wish to determine the gear reduction required to produce a specified road speed with a known engine speed, our formula is set up to read,

$$R = \frac{S \times d}{\text{m.p.h.} \times 336}$$

Other transpositions are equally simple.

The ABC's of Tire Care

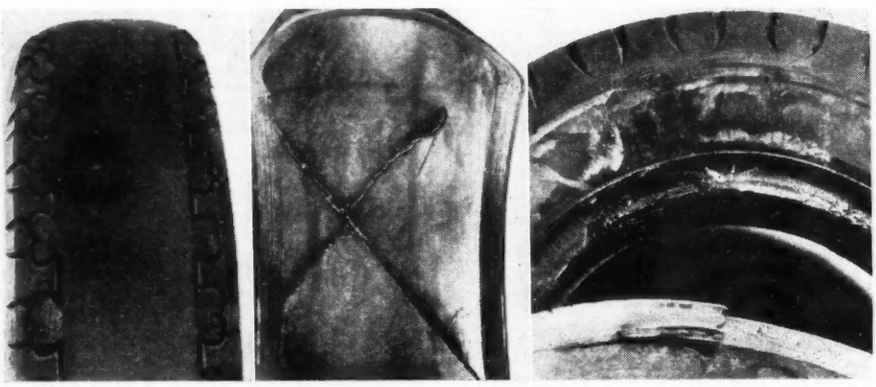
Here are the most



When a fleetman finds himself in for an extra share of tire troubles, chances are good that nearly all these troubles can be laid right in his own lap. The most common causes for being short-changed on tire mileage and the evils which may be expected are depicted on these pages. Nearly all may be avoided or greatly reduced through good tire maintenance, careful driver supervision and sound operating policies, especially with regard to loading and highway speeds.

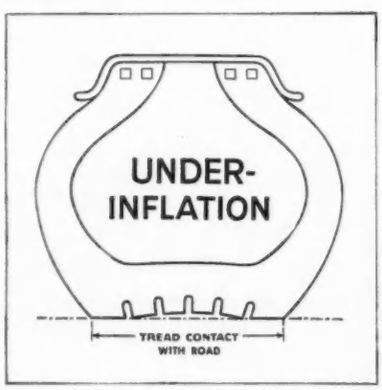
Unquestionably, the greatest tire

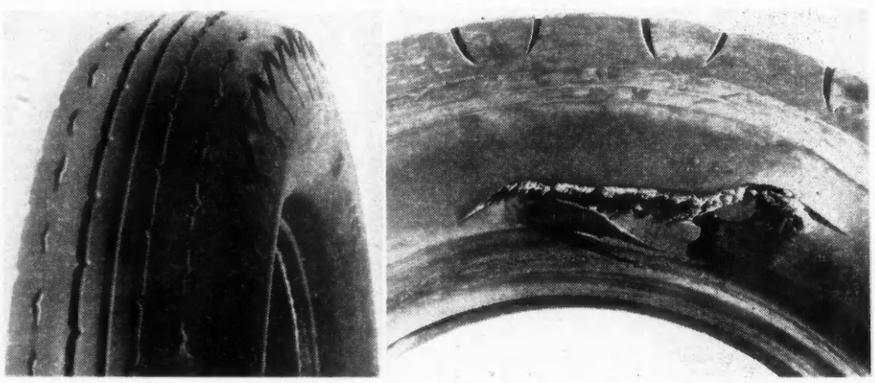
UNDERINFLATION CAUSES RAPID CENTER WEAR; TROUBLES LIKE THESE —



Most load and most wear on center of tread • More susceptible to impact brakes • Extra strain on rim and bead

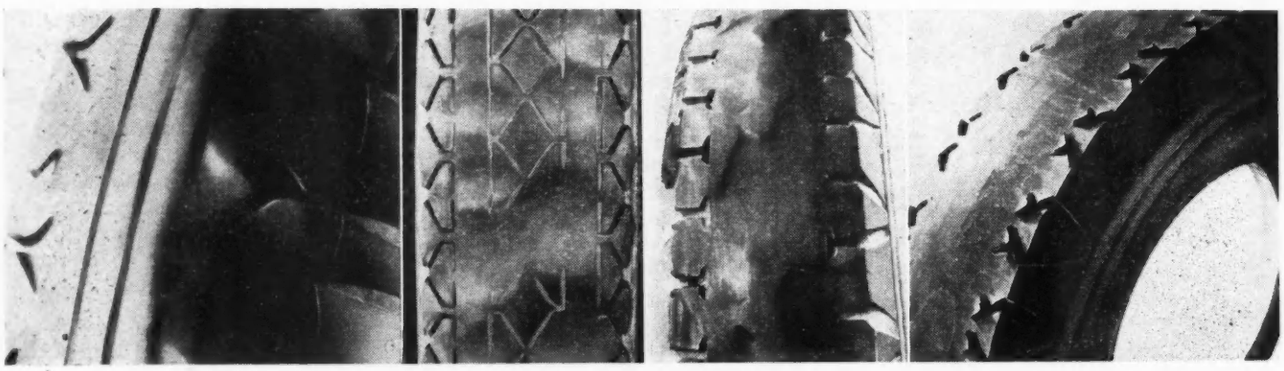
OVERINFLATION CAUSES MORE SHOULDER WEAR; TROUBLES LIKE THESE —





Most of load and most of wear on shoulders • Extra side wall flexing may lead to eventual complete failure here

MECHANICAL FAULTS SUCH AS POOR FRONT END OR FRAME ALIGNMENT —

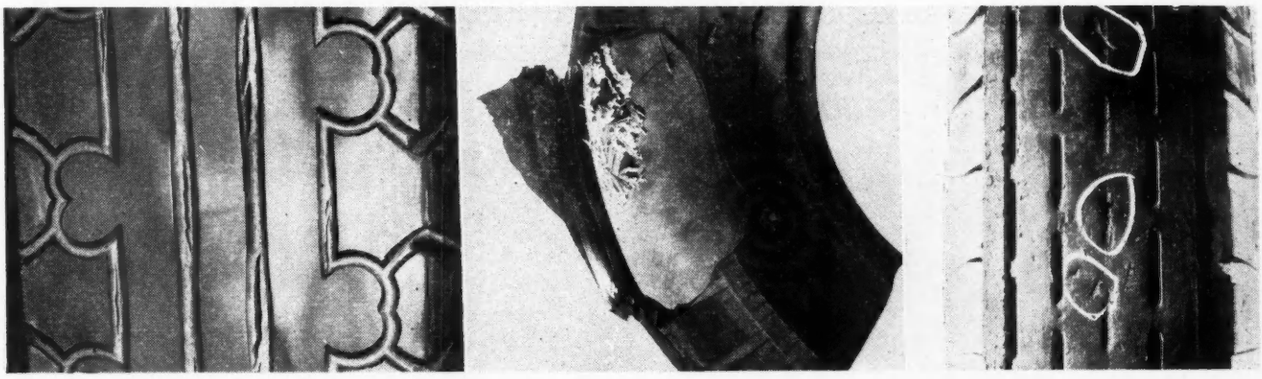


These troubles (l. to r.) were result of incorrect camber, out-of-balance, wobbly wheel, too much toe-in or toe-out - - -

enemy is excessive heat. Many of the failures illustrated can be traced back ultimately to too much heat. Keep heat down and you will build tire mileage up. This is especially true in the case of synthetics, both tires and tubes. They need an extra amount of coddling. Wherever possible, the tire manufacturers advise, break the synthetics in gradually with reduced loads and speeds. Be extra careful when mounting synthetic tubes and don't overinflate when out of the casing. For prolonged storage periods, put the tube in the casing, and lay the casing on its side to avoid out-of-round.

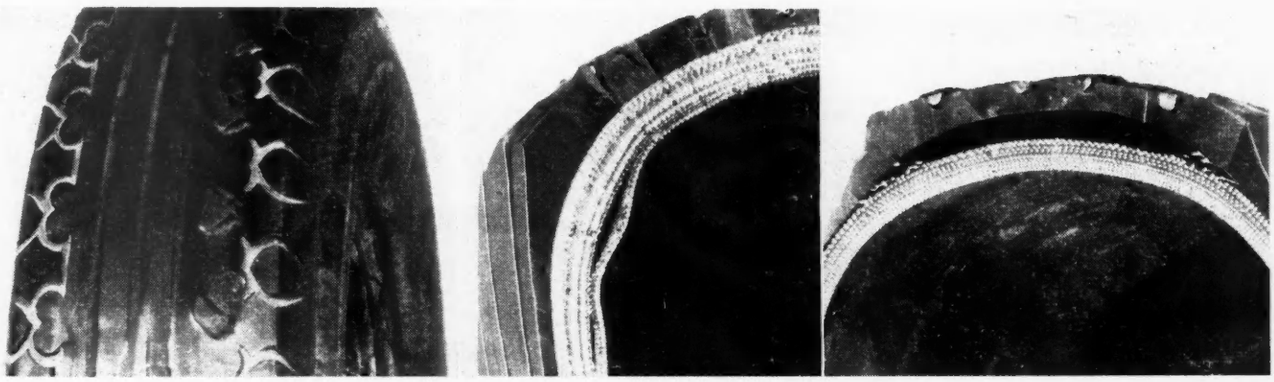
(Photos on these pages are used through the courtesy of the Rubber Manufacturers Association and the Lee Rubber & Tire Corp.)

CAN RESULT FROM CONSISTENT OVERLOAD



Abnormal growth causes cracking • Extra pressure leads to cord failure • Rubber under tension bruises easily

CAN RESULT FROM CONSISTENT UNDERLOAD



Tread wear may show up irregular • Ply separation (center) and tread separation (right) are also common troubles

CAUSE EXCESS WEAR OF THIS NATURE

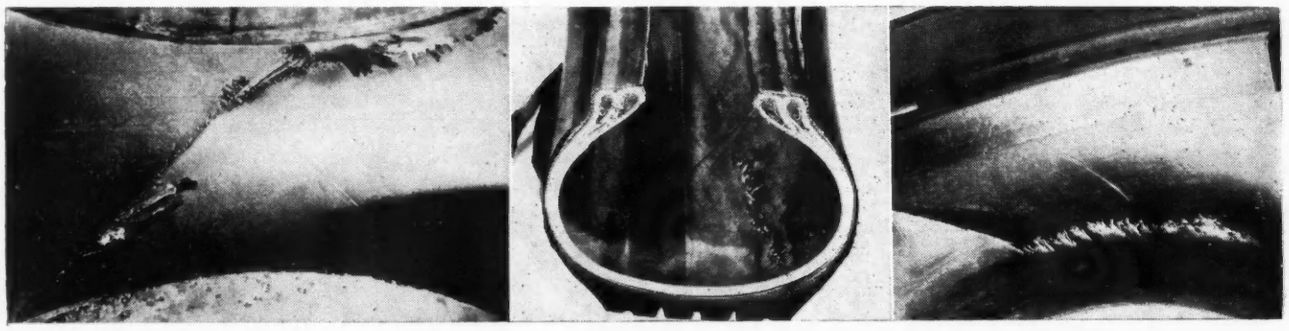
– – – Grabbing brakes, bent frame horn, bent trailer axle, damaged side ring

(TURN TO NEXT PAGE, PLEASE)

The ABC's of Tire Care

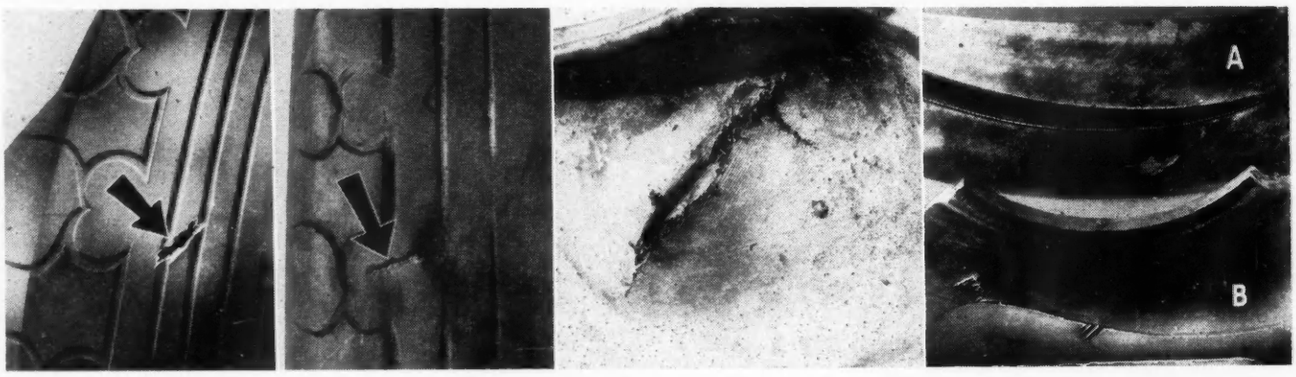
(Continued from Page 41)

HEAT, SPEED AND OVERLOADING SHORTEN TIRE LIFE EXCESSIVELY —



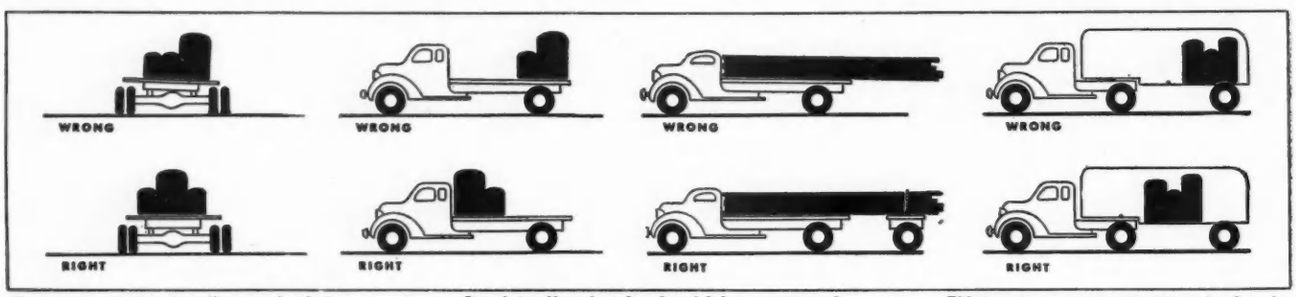
Excessive heat literally burned this casing crisp • May cause shoulder break (center) or side wall break (right)

FAILURE TO CATCH MINOR TROUBLES AND CARELESS CURB BUMPING —



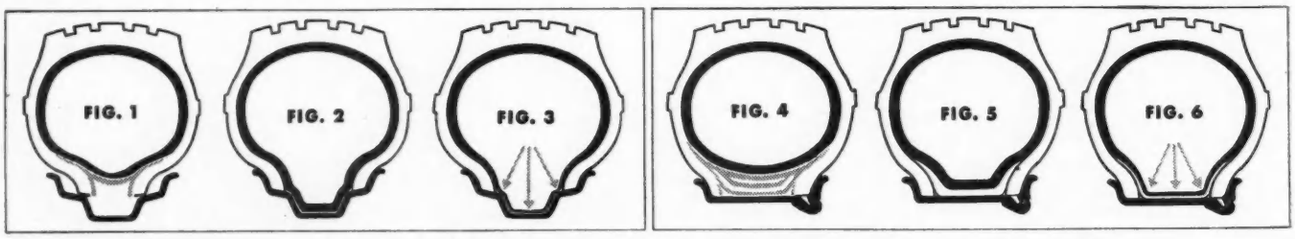
Neglected cuts caused separation • and break through tread and all plies • Poorly mounted tube left pinches

ALL TIRES SHOULD SHARE THE LOAD — KNOW RIGHTS FROM WRONGS



Common sense loading principles • Semi-trailer loads should be centered • Fifth wheel located ahead of axle

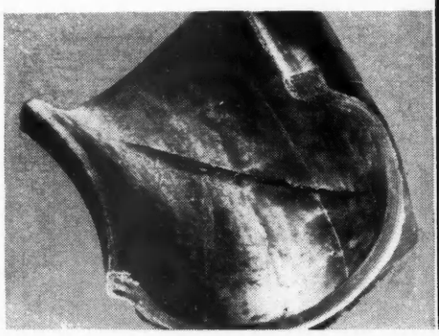
MOUNT INNER TUBES CORRECTLY — ESPECIALLY THE NEW SYNTHETICS

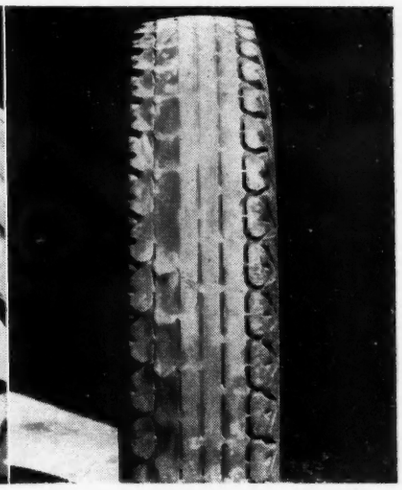


DROP CENTER RIMS: Insert tube in tire; inflate 'till round. Apply lubricating powder or neutral vegetable oil to shaded areas (Fig. 1); make sure tire is centered; hold valve stem firmly and inflate. Completely deflate and reinflate to make sure tube is evenly placed as in Fig. 2, not stretched as in Fig. 3.

LOCKING RING RIMS: Follow instructions for drop center rims adding extra lubricant to both sides of flap (Fig. 4). Tube and flap should size evenly (Fig. 5), not stretch thin (Fig. 6). Once used, a flap must be mounted in same size tire and rim. It is a good idea to mark size on flap to avoid troubles.

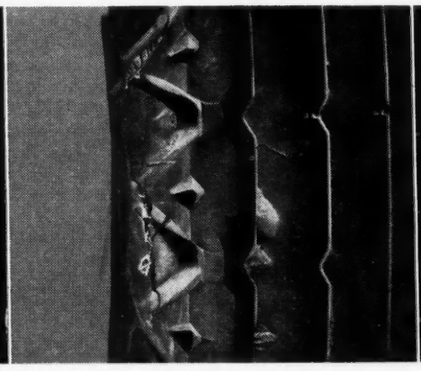
CAUSE THESE FAILURES





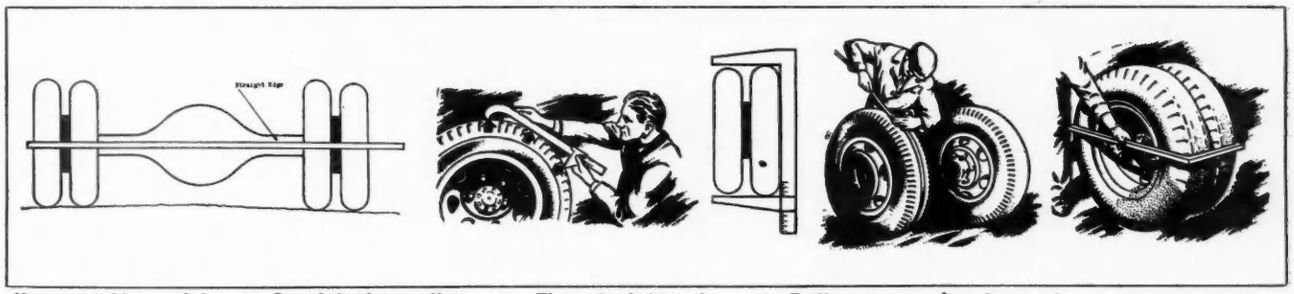
Heat may result in diagonal break • Speed on curve rolled this tire out of shape • Off-center load caused this

CAUSES WEAR AND TROUBLES LIKE THESE



Another neglected cut lead to irreparable damage • Careless curb-bumping can cause damage • or total failure

MATCH DUALS WITH EXTRA CARE — THERE ARE MANY WAYS TO DO IT



Use matching stick • Special tire caliper • Tire straight edge • Endless measuring tape • or common square

KEEP LOADS AND SPEEDS WITHIN THESE LIMITS FOR EXTRA WEAR

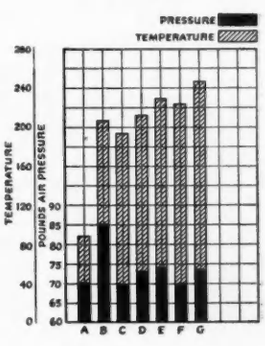
Maximum Sustained Speeds—Miles Per Hour

No. of Plies in Tire	25	30	35	40	45	50	55	60	65	70	75
	Percentages of Maximum Loads										
6-Ply						100	96	91	85	78	70
8-Ply					100	95	89	82	74	65	53
10-Ply				100	94	87	79	70	58	40	
12-Ply			100	93	85	76	63	45			
14-Ply		100	92	82	70	53					
16-Ply	100	90	78	61	29						

DON'T BLEED—HERE'S WHAT HAPPENS IF YOU DO

A—Initial conditions
B—After 150 miles at 45 m.p.h.; 4200-lb. load
C—Pressure bled from 85 lb. to 70 lb.
D—140 miles after bleeding
E—Load increased to 4700 lb.
F—Pressure bled from 74½ lb. to 70 lb.
G—200 miles after bleeding (Tire failed)

Note: Test made with 11:00 x 22 Tire. Carrying Capacity 4750 lb.



WEAR LIMITS of Axle, Brake and Engine

SOME fleets are feeling the parts shortage now more than during the war. Almost daily fleet maintenance men are asking, "I wonder if it's safe to re-use it? Can we get by until the new parts come in?"

The data below will supply the answers to those questions for certain parts — crankshafts, con-rods, bearings, axle assemblies, brake assemblies, pistons and rings, valve springs and clutches. This information has been compiled by automotive engineers and maintenance experts of some of the industry's leading replacement parts manufacturers. In each case the guiding factor has been safety. If, upon inspection with reliable mikes and gages, wear has exceeded the recommendations given, it will be better to discard the part than to risk the consequences.

Unless otherwise stated, data are based on normal service for the particular construction. If overloads, long runs and high speeds are customary, it is better to use the lowest of two limits (where two are given) or, where a single limit is given, to allow an additional safety factor.

Bearing Tolerances and Oil Clearances

Federal-Mogul Corp. recommends that the following wear limits be observed with respect to connecting rod, main and camshaft bearings.

TOLERANCES

CRANKSHAFT—A shaft worn to the extent that the bearing surfaces are ridged and scored, is unfit for use and must be reground.

Journals: Should not be more than .003 in. out of alignment.

Crankpins: Should not be more than .002 in. out-of-round. If main journals or crankpins exceed these tolerances, the shaft is unfit for further use and must be reground.

CRANKCASE—Bearing Saddle Bores: Must be round within .002 in. and in true alignment lengthwise for use with precision insert main bearings.

MAIN BEARINGS—Spread (width across the open ends) should exceed the crankcase bore diameter by .005 in. to .020 in., depending on the thickness and structural stiffness of the bearing.

CONNECTING RODS—Crankpin bearing bore and the piston pin bushing bore must be parallel with each other within .001 in. in 6 in., and the twist between these bores must not exceed .001 in. in 6 in.

Rod Bore: Must be round within .002 in.

Rod Bearings: Spread (width across the open ends) should exceed the rod bore diameter by .005 in. to .020 in., depending on the thickness and structural stiffness of the bearings. The Ford V8 rod bearings are exceptions to this rule.

Ford Rod Bearings: It is preferable that bearings be truly round and smaller at every point in the circumference than the rod bore. The correct distance across the open ends of the various Ford bearings are as follows:

1937-39 Model 60—1.797 in. desired to 1.787 in.
1940 Model 60—1.898 in. desired to 1.888 in.
1936-38 Model 85—2.217 in. desired to 2.207 in.
1939-42 Model 91—2.217 in. desired to 2.207 in.
1939-42 Mercury—2.357 in. desired to 2.437 in.

CAMSHAFT BEARINGS—After an engine has used up two sets of main and connecting rod bearings, the camshaft bearings are a potential source of trouble due to wear and should be replaced.

OIL CLEARANCES

CONNECTING RODS—End clearances of bearings are recommended as follows:

Diameter of Crankshaft Journal	Clearance
2 to 2¾ in.	.004/.006 in.
2 13/16 to 3½ in.	.006/.008 in.
Over 3½ in.	.008/.010 in.

CRANKSHAFT—End clearances at the thrust bearings should be the same as given for connecting rod end clearances.

MAIN and CONNECTING ROD BEARINGS: Oil clearances for pressure (force feed) lubrication are recommended as follows:

CLEARANCES

Dia. of Crankshaft Journal or Crankpin	Tin Base Babbitt or Bermax High Lead Babbitt	Genuine Cadmium Silver Copper	Federaloy B-30 Copper Lead
2 to 2¾	.0015	.0020	.0025
2 13/16 to 3½	.0025	.0030	.0035
3 9/16 to 4	.0030	.0035	.0040

Note A: A tolerance of Plus .001 in. is allowable on the clearances specified.
Note B: Oil clearance as shown in this chart is the difference in the diameter of the crankshaft journal or crankpin and the bore diameter of the bearing.

Eaton Front and Rear Axles

The axle division of Eaton Mfg. Co. has submitted valuable information on wear limits for its line. The data covering both front and rear axles will be found in the table below.

Dimensions given are a fair average of the entire line

PARTS	SPECIFIED FIT OR CLEARANCE	SERVICEABLE AFTER WEAR
Gear mesh, bevels—backlash	.008 to .015	.018
Herringbone mesh—back'ash	.010	.015
Gear mesh—differential backlash	.010 max.	.015
Bearing fit—cones where free—Pinion End	.001 loose to .0005 tight	Loose – .002
Bearing fit—cones where free—Housing Tube	.0002 to .0017 loose	Loose – .002
Bearing fit—cones where free—Front Axle inner wheel brg.	.0005 to .0015 loose	Loose – .002
Bearing fit—cones where free—Front Axle outer wheel brg.	.0005 to .002 loose	Loose – .003
Bearing fit—cups where free—Diff. Brgs. L. H. and R. H. Side	.005 tight to .0015 loose	.002
Differential side pinion and spider	.002 to .004 loose	.006
Side gear in differential case	.004 to .007 loose	.009
Internal gear idler pinion and pins	.0045 to .0065 loose	.009
King pin fit in I-beam	.000 to .0015 loose	.002
King pin fit in knuckle bushings	.0005 to .002 loose	Loose – .003
Differential washers back of gear	.0005 tight to .0045 loose	Loose – .006

Parts

Timken Axles & Brakes

Timken-Detroit Axle Co. gives the following recommendations on maximum wear limits. It advises close study of the limits given and adoption if they check with operating experience.

FRONT AND REAR AXLES

Bevel drive pinion thrust bearings..... .005 loose
Rear wheel bearings (full floating)..... .012 loose
Wormshaft thrust bearings..... .006 loose
Front wheel bearings..... .008 loose
Front axle steering ball
1/16 in. max. wear in diameter
Front axle steering knuckle pins..... .003 undersize
Front axle steering knuckle pin bushings .003 oversize
Trailer axle wheel bearings..... .012 loose

BRAKES

Brake camshaft bushings (babbitt or bronze) .025 loose
Brake drums (Permissible amount of material to be removed by grinding or wear):
Light types with thin linings.....1/16 in. on a side
Heavy types with thick linings....3/32 in. on a side

Service Brakes

The following working limits for better brake operation and care of Lockheed, Huck, Bendix and two-shoe cam-operated brakes, are the recommendations of J. Donald Roach, Sales Engineer, U. S. Asbestos Div., Raybestos-Manhattan, Inc.

BRAKE DRUMS—Do not cut drum wall more than 1/32 in. on cars and light trucks; more than 1/16 in. on heavy trucks and busses. Drums should be discarded if deflection in diameter is more than .060 in. under full brake application. These peace-time recommendations are subject to a wartime qualification. Drums are being turned for the use of 3/16 in. oversize blocks and it is considered better to turn the drums than to install 3/16 in. oversize blocks with rough surfaces.

Diameter should be concentric with hub within .010 in.

Surface: Refinish if worn or scored more than .010 in. or if heat checked.

Taper: Refinish if tapered or bell-mouth more than .010 in.

BRAKE SHOES—Cam Ends: Bendix shoes should be repaired (or discarded if this is not possible), if the cam end is worn or bent and if the anchor pin eye is worn at the small radius.

Rollers: Discard rollers that are worn, particularly if a flat spot is present on outside. Discard roller plates if grooved by the cam more than .015 in.

BUSHINGS—Anchor bushings should be replaced if worn more than .008 in. Anchors should be fitted and bushings accurately reamed.

ANCHORS—Pins: Anchor pin on the Huck brake is non-adjustable type, renew anchor if worn more than .008 in.

On the two-shoe cam operated brake and the Lockheed brake, renew anchor pins or rebush shoes if worn more than .008 in.

LINKS—Articulating links must be rigid and hold the shoes without side play. Examine springs and buttons and renew springs if weak. Applies to all Huck brakes.

CAM—On the two-shoe cam operated brake, camshaft should be renewed and bracket rebushed if worn more than .025 in.

SHOE TIPS & ROLLERS—On the two-shoe cam operated brake, shoe tips or rollers should be replaced if worn.

SPRINGS—All springs should be renewed if weak.

HYDRAULIC SYSTEMS—Wheel Cylinders: Dismantle and examine at each reline or if leaks are present. Renew pistons if scored, sticking, or worn more than .005 in. Replace cylinders if scored or if "no-go gage" will enter. Renew all rubber cups.

MASTER CYLINDERS—Check Valve: Pre-loading of lines should be 7½ to 12 lb. per sq. in. line pressure. Renew check valve if either of the seats are worn or misshapen or if small spring is weak or rusty.

Primary & Secondary Cups: Renew cups if distorted or if edges are rounded.

Main Spring: Renew spring if weak.

Piston: Renew if scored or worn more than .005 in. Make certain by-pass holes are open. Cylinder walls should be honed if scored. Use a "no-go gage" for measurement of cylinder diameter. If, after honing enough to remove all scores, the "no-go gage" will enter, master cylinder should be replaced.

Pistons and Rings

AMERICAN HAMMERED

Recommended Piston Ring Clearances

Note: In many cases engine manufacturers specifications will vary from those given below and these specifications should be followed where available. In the absence of the engine manufacturers' specifications the following specifications will prove of value.

END CLEARANCE 90 DEG. STRAIGHT CUT JOINT

Ring Diameter	Recommended		Serviceable	
	Minimum	Maximum	Minimum	Maximum
2 1/16-3 3/64 in.	.010 in.	.020 in.	.010 in.	.040 in.
3 1/16-4 3/64 in.	.015 in.	.025 in.	.013 in.	.045 in.
4 1/16-5 3/64 in.	.020 in.	.030 in.	.016 in.	.050 in.
5 1/16-6 3/64 in.	.020 in.	.030 in.	.019 in.	.050 in.

[1] Piston ring end clearance should always be measured at the smallest part of the cylinder bore, usually at the bottom of the cylinder below the ring travel. If ring clearance is in excess of the maximum serviceable clearance a ring .01 in. larger in diameter should be used and the end clearance adjusted.

MUSKEGON

The Muskegon Piston Ring Co. specifies that the maximum serviceable clearances for piston ring grooves should not exceed .005 in. for either the compression or oil ring grooves.

SEALED POWER

The Sealed Power Corp. submitted the following recommendations:

"Modern service rings are designed to compensate for a reasonable amount of cylinder wear. Sealed Power Individually Engineered Ring Sets are designed to function satisfactorily in cylinder bores up to 0.015 taper. Beyond this point reboring is recommended for long life and greater efficiency.

"Check the clearance between new ring and ring groove. This should not be less than 0.0015 in. and not more than 0.004 in. Pistons which are cracked or do not meet these checks should be replaced. Lo-Ex pistons are now being used by many manufacturers as original equipment and also furnished for replacement in older models which were originally equipped with cast iron, steel strut or aluminum pistons."

Valve Springs

Valve springs should be replaced if they fall 10 per cent below original specified rating or show any signs of corrosion.

Clutches

On the subject of clutches, Lipe-Rollway says that pressure plates badly scored or dished in excess of 0.015 in. should be replaced. Driving lugs of new pressure plates must fit freely in the slots of the flywheel ring with a clearance of 0.003-0.004 in.

Borg & Beck believes it inadvisable to give limiting dimensions for component parts. In their opinion it is better to show clearances which can be measured by a feeler rather than to provide special tools and gages for checking dimensions. Several points of the B & B clutch subject to wear have been deliberately omitted from discussion as the manufacturer is convinced that the clutch will function properly regardless of wear at these points.

Borg & Beck supplies two general types of clutches —the "A" type and the "Q" type—each one made in a variety of sizes. The general service instructions below for each type apply to all models for each type.

Brown-Lipe Clutch—"Q" Type

PRESSURE PLATE

Max. width driving slot = .508 in.
Max. depth pockets in cam due to lever movement = .010 in.
Max. depth score grooves permitting salvage by regrinding friction surface = .015 in.
Max. depth of score grooves permissible without regrinding friction surface = .005 in.
Max. out-of-flat permissible without regrinding = .007 in.

LEVER

To be scrapped if contact area for pressure plate and release sleeve groove is pitted or grooved.

RELEASE SLEEVE

To be scrapped if wear in lever groove is 1/32 in.

SPRING

Load loss up to 10 per cent permissible before replacement.

DRIVEN PLATE

Replace disc (or facings) if there is any evidence of oil on the surfaces. Even a very small amount of oil may cause severe chatter.

When facings are worn to the rivet heads or within .010 in. from the heads, a new disc (or facings) should be installed.

Burned facings should be replaced.

It is better to replace the entire disc assembly than to reface. Special tools and skilled workmanship are required for attaching facings to the driven member.

Max. play of disc on splines should not exceed 3/32 in. measured at periphery. Replace disc if splines are worn. Be sure to check alignment between engine and transmission whenever excessive spline wear is found.

Replace entire driven plate if excessive play has developed in damper parts. Max. free play at periphery should not exceed 1/16 in.

Brown-Lipe Clutch—"A" Type

COVER

Max. total wear lanced holes = .005 in.
Max. play between pressure plate lug and lanced hole in cover = .015 in.

PRESSURE PLATE

Max. depth score grooves permitting salvage by regrinding friction surface = 3/64 in.
Max. depth grooves allowable without regrinding friction surface = .005 in.
Max. depth side wear of levers into pressure plate lugs allowable before plate should be scrapped = .010 in.
Max. out-of-flat permissible without regrinding = .007 in.
Max. depth of wear of cover lanced holes into sides of pressure plate lugs before scrapping = .010 in.

LEVERS

Max. width of worn area at inner end where lever contacts bearing = 3/16 in. Scrap if case-hardened surface has worn through at any point.

SPRINGS

Load loss up to 10% allowable before replacement.

EYEBOLTS

Replace if hole is worn more than .005 in.

EYEBOLT PIN

Replace if pin has rough or pitted areas.

DRIVEN PLATE

Replace disc (or facing) if there is any evidence of oil on the surfaces. Even a very small amount of oil may cause severe chatter.

When facings are worn to the rivet heads or within .010 in. from the heads, a new disc (or facings) should be installed.

Burned facings should be replaced.

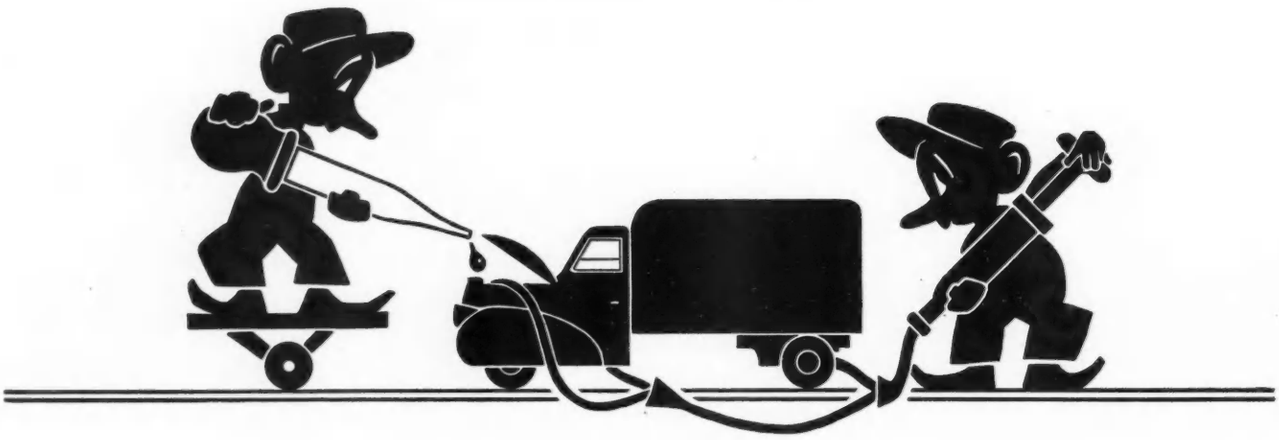
It is better to replace the entire disc assembly than to reface. Special tools and skilled workmanship are required for attaching facings to the driven member.

Max. play of disc on splines should not exceed 3/32 in. measured at periphery. Replace disc if splines are worn. Be sure to check alignment between engine and transmission whenever excessive spline wear is found.

Replace entire driven plate if excessive play has developed in damper parts. Max. free play at Periphery should not exceed 1/16 in.

• ENGINE • TRANSMISSION • AXLE •

LUBRICANT and COOLING SYSTEM CAPACITIES



Material waste around the average fleet shop is tremendous. A pint of oil too much in the engine, a half pint too much in the transmission, a pint too much in the rear, then add spillage and at the end of the year enough has been wasted to lubricate the entire fleet. Even over-filling the cooling system can be expensive—when anti-freeze overflows with the water.

This waste can be eliminated if the men doing the job are supplied with data giving the correct capacities of the crankcase, rear, transmission and cooling system.

ENGINE LUBRICANT CAPACITY

Mechanics are used to dealing with round figures when it comes to dispensing engine lubricants. Therefore, when a system calls for 6½ or 7¼ quarts, they may supply 7 or 8, more likely than not. That is waste. It is overlubrication, which will not improve performance—if anything, it enhances carbon formation. The accompanying Table will serve as a guide to the exact quantity required.

TRANSMISSION CAPACITIES

It is essential that the transmission lubricant be maintained at the proper level, not only to insure an ample supply for the gears but to lubricate the main shaft and gear bearings.

Carelessness in dispensing this lubricant will result in over- or underlubrication which, in the first case, will build up high internal pressures (which may go so far as to contaminate the clutch facing) or, in the second case, cause excessive wear and premature failure.

Caution should be exercised to ascertain that the transmission is a standard unit. Special transmissions may have different lubrication requirements.

REAR AXLE CAPACITIES

Differential gears run in a bath of lubricant, the correct amount of which is predetermined by the designing engineer. An insufficient supply causes excessive wear, noisy gears, and pinion and cross shaft bearings will not receive the necessary supply. Overlubrication, the other extreme, creates high internal pressure, which may force the lubricant past the bearings on to the brake lining.

Data in the accompanying Table has been prepared to help the lube man to avoid such conditions. However, the lube man should be positive whether the rear being lubricated is special or standard for that truck.

COOLING CAPACITIES

Two of several reasons why cooling system capacities should be known accurately are: Anti-freeze safety and efficiency in cleaning. The first point is very obvious and the other will be when it is recalled that the customary method of cleaning cooling systems is by dumping a packaged or measured compound into a radiator and letting it circulate. It follows that some systems will require more than a single package or, at least, a longer time to circulate the solution. Guesswork on the part of the mechanic will not result in a satisfactory job.

ABBREVIATIONS

a—2-speed rear, 8 qt.
b—Double reduction rear, 6½ qt.
c—Double reduction rear, 9 qt.
d—Front axles same as rear.
e—10 summer, 14 winter.
ea—Each axle.
f—2-speed rear, 13 to 15.
g—2-speed rear, 18.
h—Auxiliary transmission and power divider require 8½ qt. additional.
i—Flus 1 qt. per filter.
j—10 summer, 15 winter.
k—18 pt. summer, 24 pt. winter.
m—8 pt. summer, 12 pt. winter.
n—Capacity of jackshaft unit.
p—Auxiliary transmission requires 6 pt. additional.
q—Auxiliary transmission requires 10 pt. additional.
r—For overdrive transmission, direct drive requires 18 pt.
s—14 for heavy-duty axle and for 2-speed axle.
t—When oil filter is drained, add 1 extra quart engine oil.
tt—Dry capacity 5½ qts.

TRUCK MAKE AND MODEL	LUBRICANT CAPACITY			Cooling System Capacity, Quarts
	Engine Quarts	Transmission Pints	Rear Axle Pints	
AUTOCAR				
C10, C10T, U10, U10T	6	8	8	22
C20, C20T, U20, U20T	6	12	12	22
C30, C30T, U30, U30T	10	12	12	23
C40, U40	10	14	12	23
C40T, C40D, C4062, U40T, U40D, U4062	10	14	14	23
C4064	10	14	12 ea	23
C50T, U50T	10	14	14	23
C50D	10	16	20	23
C60	12	14	14	39
U60	12	14	14	37
C60T, C70, C70T, C70D, C7062	12	14	20	39
U60T, U70T, U80, U80T, U80D, U8062	12	14	18	41
U60D	12	14	18	37
U70, U7062	12	14	20	41
C7044	12	14x	.....	39
C7064	12	14	12 ea	39
U7064	12	14	12 ea	41
C80, C80T, C8062	12	14	18	39
C80D	12	14y	18	39
C8044	12	14 x	.....	41
C8064, U8064	12	14	16 ea	41
C90, C90T, U90, U90T	12	14	18	41
C90D	12	14 y	.....	41
U90D	12	24	.....	41
C9044	20	24 x	.....	48
C9062, U9062	12	14 y	18	41
C9064	12	14 y	.....	41
U9064	12	14	.....	41
DC100T	16	24 y	18	46
DC100D	16	26 y	.....	46
DC10044	16	24 x	.....	46
DC10062	16	26 y	18	46
DC10064	16	24	.....	46
DU100T, DU10062	20	26	18	41
DU10064	20	26	.....	41
C50, C50T, U50, U50T (1945-46)	10	14	20	27
C5064 (1946)	10	14	12 ea	27
C70, C70T (1945-46)	12	14	20	34
C70S, C70TS (1945-46)	12	14	18	33
U70, U70T (1945-46)	12	14	20	39
U70S, U70TS (1945-46)	12	14	18	39
C90 (1945-46)	12	14 y	18	33
C90D (1946)	12	14 yy	20	33
C90T (1945-46)	12	14	18	33
U90, U90T (1945-46)	12	14	18	38
DC100, DC100T, DC100D (1945-46)	20	18 yy	18	40
DC100DN (1946)	28	18 yy	18	40
DC10064 (1945-46)	20	18 yy	14 ea	40
DC10064S (1945)	20	18 yy	20 ea	40
BROCKWAY				
78 (1936-42)	5	6	6	15½
83 (1936-42)	5	6	6	19½
88 (1936-42)	5	6	8	19½
92 (1936-42)	5	6	8	19½
94 (1936-42)	5	5½	12	19½
96, 110, 125X (1936-40)	8	5½	8	28
112 (1938-42)	7	5½	8	22
128 (1938-42)	7	5½	12	22
130, 145 (1936-40)	8	5½	12	28
150X4 (1936-40)	8	8½	12	28
150X5 (1936-40)	8	16	12	28
160X, 160XSBT, 165X (1936-40)	8	16	12	30
170X (1936-40)	10	24	11	29
180XSBT Spec. (1936)	10	24	13	30
175X, 195X (1936-42)	10	24	12	30
220X (1936-42)	10	24	17	30
240X (1936-42)	10	24	12	31
260X (1936-42)	10	23	17	31
146 (1941-42)	7	12	12	22
147 (1941-42)	7	12	16	22
152, 153 (1941-42)	8	16	12	28
154 (1941-42)	8	16	16	28
156 (1941-42)	8	16	18	28½
162 (1941-42)	8	16	12	29
166 (1941-42)	8	16	12	29½
88W (1944-45)	5	6	12	21
88WH (1945-46)	7	12	12	25
146W (1944-46)	7t	12	12	25
152W (1944-46)	8t	16	18	32
154W (1944-46)	8t	16	18	30
154WH (1946)	16u	24	18	40
260XW (1944-46)	16u	24	34	40
260XW-1 (1944-46)	16u	24	29v	40

TRUCK MAKE AND MODEL	LUBRICANT CAPACITY			Cooling System Capacity, Quarts
	Engine Quarts	Transmission Pints	Rear Axle Pints	
CHEVROLET				
½ Ton (1934-35)	5	2½	4½	10½
1½ Ton (1934-35)	5	6½	6½	10½
½ Ton (1936)	5	2½	4½	15
1½ Ton (1936)	5	6½	7	15
½, ¾, 1 Ton (1937-38)	5	1½	4½	14
1½ Ton (1937-38)	5	7	9	14
½, ¾ Ton (1939-42)	5	1½	4½	14
1½ Ton (1939)	5	5¼	9	14
1½ Ton (1940-42)	5	5½	11 s	14
C.O.E. (1939-40)	5	5½	9	16½
C.O.E. (1941-42)	5	5½	11 s	16
All Trucks 1½-Ton (1944-46)	5	5½	11 s	16
½ Ton (1945-46)	5	1½	4½	14
All Trucks 2-Ton (1946)	5	5½	12	16
CORBITT				
12B (1937)	6	8	12	26
22B (1937)	8	24	14	30
14BT (1937)	8	8	8	26
18BT (1937)	8	24	14	30
22BT (1937)	10	30	15	38
27DT (1937)	10	30	16	38
12B (1938-41)	5	8	12	26
13B (1938-41)	5	8	8	27
17B, 17BT (1938-44)	7	12	14	28
21B (1938-41)	8	16	15	30
26D (1938-41)	8	16	16	30
14BT (1938-41)	7	12	8	29
18BT (1938-41)	8	16	14	31
22BT (1938-41)	10	24	15	38
27DT, F27, 27BT (1938-44)	10	24	16	38
F12 (1938-42)	5	8	12	27
F14 (1938-42)	7	8	8	28
F18 (1938-44)	8	8	9	30
F19 (1938-42)	7	12	9	28
F23 (1938-42)	10	16	11	38
F35 (1938-44)	10	24	17	38
DIAMOND T				
412DR (1935-37)	8	10	12	24½
512B (1935-37)	8	10	8	24½
512DR (1935-37)	8	10	15	24½
212A, 212B (1936-37)	6	4½	6	23½
221 (1936-37)	6	4½	6	24
228 (1936-37)	6	4½	8	23½
244, 313 (1936-37)	6	4½	8	24
320 (1936-37)	6	6	8	26½
353, 360 (1936-37)	6	10	8	26½
80 (1936-37)	6	2	5	18
80, 301, 304 (1938)	6	4	4	21
401COE (1938)	6	4	6	23½
402COE (1939)	6	4	8	23½
404, 405 (1938)	6	4	6	22½
406 (1938)	6	4	6	23
507 (1939)	6	6	8	23½
509 (1939)	6	6	6	23
607COE (1939)	6	6	8	26
609COE (1939)	6	10	8	26
611 (1939)	6	7	8	25
612 (1939)	6	10	8	25
613, 614 (1939)	6	10	8	24
412DR, 512DR (1939)	8	18	12	26
512B (1939)	8	18	10	26
201, 305, 306 (1939)	6	4	4	16
201C, 305C (1939)	6	4	5	18
306C (1939)	6	4	6	18
404, 406 (1939)	6	4½	6	23
404C, 509 (1939)	6	4½	6	23
509C, 612C (1939)	6	4½	8	23
612 (1939)	6	4½	8	22
614 (1939)	6	12	8	22
614C (1939)	6	12	8	24
803C (1939)	8	20	10	28
804C (1939)	8	20	12	28
201 (1940)	6	3½	6	16
201C (1940)	6	4½	8	18
306, 306C (1940)	6	4½	8	18½
306SC (1940)	6	4½	8	19
404 (1940)	6	4½	8	18
404C (1940)	6	4½	8	23½
404SC (1940)	6	4½	8	26
406, 509 (1940)	6	4½	9	23½
509C, 612C (1940)	6	4½	9	24
612 (1940)	6	4½	9	23
614, 614C (1940)	6	12	9	31½
803C (1940)	8	20	12	28
804C (1940)	8	20	16	28
805H, 805W (1940)	8	20	20	28
805B, 805BW (1940)	8	20	12	28

TRUCK MAKE AND MODEL	LUBRICANT CAPACITY			Cooling System Capacity, Quarts
	Engine Quarts	Transmission Pints	Rear Axle Pints	
DIAMOND T—Cont'd				
805DR, 805DRW (1940)	8	20	12	28
900W (1940)	13	24	14	43½
201 (1941-42)	6	3½	6	16
201C, 306C (1941-42)	6	4½	8	18
306 (1941-42)	6	4½	8	17
306SC (1941-42)	6	4½	8	19
404, 404C (1941-45)	6	5	8	23
404SC (1941-42)	6	5	8	26
406, 509, 612SC (1941-45)	6	5	9	23
406SC 509SC (1941-45)	6	5	9	26
509C, 612C (1941-42)	6	5	9	24
612 (1941-42)	6	5	9	22
614 (1941-45)	6	12	9	22
614C (1941-42)	6	12	9	23
612SC (1941-42)	6	5	9	25
614SC (1941-42)	6	12	9	25
805C (1941-42)	8	20	12	28
806, 806C (1941-45)	8	20	16	28
805 (1941-42)	8	20	20	28
702 (1941-42)	8	20	12	44
702 (1945)	8	20	22	28
900 (1941-45)	14	24	14	44
DODGE				
KC, KCL, KH Series, LC	5	2½	3½	15
K32, K33, K34	5	6	5	12
K35, K36, K37, K38, K45, K46, K47, K48	6	5	8	14
K50, K51, K52, K70, K71, K72	8	10	8	23½
LE Series	5	6	4½	16½
LF Series	5	6	8	16
LG, LH Series	6	11	14	18
K50V, K51V, K52V, K60V, K61V, K62V	8	11	14	20¾
MC, RC Series (1937-38)	5	3½	3½	16
MD, RD Series (1937-38)	5	3½	4	16
ME, RE Series (1937-38)	5	6	6½	18
MF, RF Series (1937-38)	5	6	8	18
MG, MH, RG, RH Series (1937-38)	5	11	8	19
ML, MK, RL, RK, RU Series (1937-38)	8	11	14	
TC (3-Speed Trans.)	5	3½	3½	15½
TC (4-Speed Trans.)	5	6	3½	15½
TD-15 (3-Speed Trans.)	5	3½	3½	17
TD-15 (4-Speed Trans.)	5	6	3½	17
TD-20, TD-21(3-Speed Trans.)	5	3½	4	17
TD-20, TD-21(4-Speed Trans.)	5	6	4	17
TE (4-Speed Trans.)	5	6	6½	19½
TF (4-Speed Trans.)	5	6	11a	19½
TF (5-Speed Trans.)	5	11	11a	19½
TG, TH	5	11	10ab	20½
TL, TK, RO, RP	8	11	7ac	28
TLD, TKD	14	11	7ac	
VC, WC	5	3½	3¼	15½
VD-15, WD15	5	3½	3¼	17
VD-20, VD-21, WD20, WD21	5	3½	4½	17
VF, VM, WF, WFM	5	6	11	19½
WFA, WHA	5	6	16	19½
VG, VH, WG, WH, WGM, WHM	5	11	10ab	20½
VK, VL, WK, WL	8	11	14ac	28
VKD, VLD, WKD, WLD	14	11	14ac	35
WDX (1946)	5	6	6	17
FEDERAL				
9 (1937-38)	5	4	4	18
10 (1937-38)	4	4	4	18
11, 11K, M11, 12K, M12, 14K	4½	4	4	15
11H, 14, M14	4½	4	4	15
15, 15H, 15K, 16K, 17K, 18, 18H, 18K, 20, 20H, 20K	4	4	8	25
75, 75H, 75K, 76K, 77K, 80, 80H, 80K	4	4	8	25
29, 29K, 89, 89K	4	13	12	25
29H, 89H	4	13	15	25
25, 25H, 25K, 85, 85H, 85K	4	8	12	25
C7, C8	10	24	22	29
40, 50, 40F	8	9	15	30
62	12½	22	32	34
63	10	22	32	32
7M7	5	5	3	12
8M8	4½	5	3	14
35, 90	7	12	12	28
45, 55, 92, 94	7	10	15	28
18M (1944-45)	6	4	8	23
29M (1944-45)	6	13	12	21
45M, 55M (1944-45)	8	20	38	31
60M, 60MA (1944-45)	10	24	16	30

(TURN TO NEXT PAGE, PLEASE)

u—When oil filter is drained, add 2 extra quarts engine oil.
v—2-speed axle.
w—Auxiliary transmission requires 7½ pt. summer, 10 pt. winter.
x—Auxiliary transmission requires 5 pt. additional.
y—Auxiliary transmission requires 12 pt. additional.
yy—Auxiliary transmission requires 13 pts. additional.
z—With oil filter, 6 qts.
†—With Eaton rear axle, 14½ pts.
‡—With overdrive, 4½ pts.; with 4-speeds, 6 pts.
‡—With 2-speed axle, 12 pts.
DP—Dual Performance.
DR—Double Reduction.
SB—Spiral Bevel.
TS—"T" Spiral Bevel.

Note 1—Front axle only.
Note 2—Transfer case, 4 pts.; front axle, 20 pts.
Note 3—Transfer case, 5 pts.; front axle, 24 pts.

•ENGINE

•TRANSMISSION

•REAR AXLE

LUBRICANT & COOLING SYSTEM

TRUCK MAKE AND MODEL	LUBRICANT CAPACITY			Cooling System Capacity, Quarts
	Engine Quarts	Transmission Pints	Rear Axle Pints	
FORD				
AA, BB, 4 Cyl. (1929-34)	5	2½	7	13½
BBV8 (1932-34)	5	2½	7	22
51V8 (1935-36)	5	2½	7	25
75V8 (1937)	5	1¾	2½	16
79V8 (1937)	5	5	7	25
81T, 817T (1938)	5	5	7	24
81Y	5	2½	5	22
82Y (1938)	4	2½	5	16
81C (1938)	5	2½	2½	22
82C (1938)	4	2½	2½	16
91T, 917T, 911W, 91W, 917W, 99T, 997T, 991W, 99W, 997W (1939)	5	5	7	24
91Y, 91C (1939)	5	2½	3	22
92Y, 922C (1939)	4	2½	3	16
018T, 01T, 01W, 011W, 098T, 09T, 09W, 091W, 118T, 11T, 11W, 111W, 119T, 19T, 19W, 191W	5	5	7	24
01D, 01Y, 01C (1940)	5	2¾	3	22
02D, 02Y, 022C (1940)	4	2¾	3	16
11D, 11Y, 11C (1941-42)	5	2¾	3	24
1ND, 1NY, 1NC (1941-42)	4	2¾	3	14
498T, 494T (1944); 598T, 594T (1945)	5	5	6	23
69C	5z	2¾	2½	23
6GC	5z	2¾	2½	17
69D, 69Y	5z	2¾	3	23
6GD	5z	2¾	3	17
69T, 698T, 694T, 69U, 691W, 69W, 698W (1946)	5z	5	6†	23
6GT, 6G8T, 6GU (1946)	5z	5	6†	17
FWD				
HS	8	12	6d	26
HM	10	16	8d	30
CUA	10	24	8d	30
CU	10	16	8d	30
SU	14	24	8d	36½
M6	12	24	12d	...
MJ6	12	22	12d	42
MJ6X6	12	22	16d	42
M10	20	22	16d	64
T28	10	12	12d	24
T30	8	12	6d	26
T32	12	16	12d	28
T40	12	24	8d	36
T60	20	26	8d	36
T65	20	26	16d	40
T72	20	22	16d	52
HA	10	12	5d	23
HG, HR	12	12	5d	26
YU	12	24	8d	36½
M7	20	22	16d	65
M6X6	20	22	16d	52
G. M. C. (General Motors Trucks)				
CC-100	10	1¾	4½	15½
CC-150	10	1¾	4½	16
CC-250	10	1¾	3	16
CC-260	10	1¾	6	16
CC-300, CC-350	10	6½	DP-13 TS-14	17
CC-400	10	6½	DP-13	18
CC-450	10	13	DP-16 SB-13	18
CF-300	10	13	6	17
CF-350	10	13	7	17
CF-400	10	13	7	18
CF-450	10	13	9	18
AC-100	10	1¾	4½	15½
AC-150	10	1¾	4½	16
AC-250	10	1¾	5½	16
AC-300	10	6½	6	17
AC-350	10	6½	7	17
AC-400	10	4	7	18
AC-450	10	7	8½	18
AF-240	10	1¾	5½	16
AF-300, AF-310	10	6½	6	17
AF-350, AF-360	10	6½	7	17
AF-400, AF-410	10	7	7	18
AF-450, AF-460	10	7	8½	18
AC-500	10½	13	10	18
AC-520	10½	13	DP-16	18
AC-550	10½	13	18	18
AC-600	10½	14	DP-17	18
AC-620	11½	14	DP-17	22
AC-650	10½	13	18	18
AC-700	11½	14	DP-18	22
AC-720	11½	9	DP-18	22

TRUCK MAKE AND MODEL	LUBRICANT CAPACITY			Cooling System Capacity, Quarts
	Engine Quarts	Transmission Pints	Rear Axle Pints	
GENERAL MOTORS—Con'd				
AC-750	11½	9	DP-20	22
AC-770	11½	14	DR-20	22
AC-900	11½	9	DR-28	22
AC-950	11½	9	DR-38	22
AC-970, AC-990	11½	9	DR-20	22
AF-500	10½	13	10	18
AF-520	10½	13	DP-16	18
AF-550, AF-600	10½	13	18	18
AF-620	11½	14	DP-17	22
AF-650	10½	13	18	18
AF-700	11½	14	18	22
AF-720	11½	9	DP-18	22
AF-750	11½	9	DP-20	22
AF-900	11½	9	DR-12	22
AF-950	11½	9	DR-20	22
ACR-520	10½	14	DP-16	18
ACR-620	11½	14	DP-17	22
ACR-720	11½	9	DP-18 DP-20	22
ACR-750	11½	9	DP-20	22
AFR-520	11½	14	DP-16	18
AFR-720	11½	9	DP-18	22
HUDSON				
58	4½tt	2	2¾	13
HUG				
42 (1936-39)	10	16	9	28
43 (1936-39)	10	24	11	28
D42 (1936-39)	10	24	9	31
D43 (1936-39)	10	15	11	31
D43L (1936-39)	14	15	12	38
70K (1936-39)	10	16	12	28
87Q, D87Q (1936-39)	10	24	16	28
99, 99S, D99, D99S (1936-39)	14	24	52	38½
15W (1940-42)	8	8	8	23
19W, 83W, CB8P (1940-42)	8	12	8	23
23W, CB7P (1940-42)	8	12	8	24
42W, 85W CB9P (1940-42)	8	16	8	28
43W (1940-42)	18	15	12	38
87W (1940-42)	8	16	11	28
92U (1940-42)	10	24	16	28
98 (1940-42)	18	36	16½	38
D98 (1940-42)	14	36	16½	38
99 (1940-41)	18	36	33	38
D99 (1940-41)	14	36	33	38
99S (1940-41)	18	36	52	38
D99S (1940-41)	14	36	52	38
51-6 (1942)	20	18	24	60
INTERNATIONAL				
C1, C15, C30, CS30, C30S	6½	5½	9½	15
A1, A2, B2, M2, M3, C10, C20, CS20	4	5½	9½	17
B3	7	5½	9½	20
C5	4	3	4	14
C35, C35B, CS35, CS35B, C35T, CS35T, B4, C40, CS40, C40T, C40F	7	9	15	20
A4, A5, A6, C50, C50T	10	11½	12	28½
C55, C55F, C55T, C60, C60T	9	11½	12	29½
A7, A7F	20	48	24	42
A8	20	48	24	42
D2, D15	6½	3	4	15½
D5	4	3	4	14¼
D30, D30B, D303, D186T	6½	5½	7	18
DS30, DS30B, DS186T	6½	5½	17	18
D35, D216T	7¼	5½	10	18¾
D35B	7¼	14	10	18¾
DS35	7¼	5½	17	18¾
DS216T	7¼	5½	16	18¾
D40	7¼	14	10	21¾
DS40	7¼	14	16	21¾
D50, DR50, D246, DTR246T	10	14	16	24¾
DS50, DS246T	10	19	17	24¾
D60, DR60	10	19	16	28
DR70, DR346T	10	19	16	31
D300	6½	5½	7	19¼
DS300	6½	5½	17	19¼
D500, DR500	10	14	16	25½
DS500	10	19	17	25½
DR700	10	19	16	32
D246F	10	14 h	15 ea	24¾
D346F	10	19 h	16 ea	31
DR426F	10	48 h	16 ea	31
AR626F	22	48 h	12 ea	60
M3	4	5½h	9½	17
K1, K2	5½	3	4	15
K3	5½	3	5	15
K4	5½	5½	7	15¼
KS4	5½	5½	8	15¼

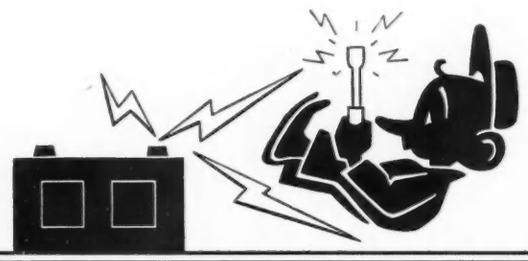
TRUCK MAKE AND MODEL	LUBRICANT CAPACITY			Cooling System Capacity, Quarts
	Engine Quarts	Transmission Pints	Rear Axle Pints	
INTERNATIONAL—Con'd				
K5	5½	5½	7	15½
KS5	5½	5½	13	15½
K6	7¼	5½	10	20¾
KS6	7¼	5½	13	20¾
K7	7¼	11	10	20¾
KR7	7¼	11	17	20¾
KS7	7¼	11	16	20¾
K8	10	11 r	18	25½
KR8	10	11	17	25½
KS8	10	11	18	25½
K10	10	18	12	25½
KR10	10	18	17	25½
KR11	10	18	18	25¾
K5COE	5½	5½	7	22¾
KS5COE	5½	5½	13	22¾
K6T	7¼	5½	10	20¾
KS6T	7¼	5½	18	20¾
K6F	7¼	5½	7 ea	20¾
K7COE	7¼	11	10	22½
KS7COE	7¼	11	16	22½
K9T, KS8T	10	11	18	25½
KR9T	10	11	20	25½
K9F	10	11	10 ea	25½
K9COE, KS8COE	10	11	18	25½
KR9COE	10	11	17	25½
KS10	10	18	22	25½
KS11, KS11T	10	18	22	25¾
KR11T	10	18	17	25¾
K11F	10	18	11 ea	25¾
KR11COE	10	18	18	30½
KS11COE	10	18	22	30½
KR12F	10	26	18 ea	27
KR-11 (1944)	10	24	18	26¼
KS-11 (1944)	10	24	22	26¼
KENWORTH				
521	20	18	38	56
523	20	18	14	56
524	20	18	20	56
525	20	24	.....	56
528	20	24	14	48
532	8	16	14	48
548, 552, 584	20	18	26	56
585	14	24	38	....
587	20	24	38	48
LA FRANCE REPUBLIC				
C3	8	6	8	22
D4	8	7	8	22
E4	8	8	9	22
F4, H6	8	16	12	32
K1	10	12	16	36
M4	10	12	26	36
EH5B, EH5D	8	12	9	40
EH6B, EH6D	8	12	12	40
FH5B, FH5D	8	16	12	....
HH7	8	16	12	....
KH2	10	24	12	....
MH5	10	24	16	....
MARMON-HERRINGTON				
A10-4, A20-4	6	8	16	22
A30-4, A40-4, A50-4	7	24	18	26
TH300-4, TH310-4	10	26	32	36
TH310A-4, TH310A-6	10	26	36	40
TH315-4, TH315-6	20	32	36	50
TH320-4, TH320-6	20	16	48	50
B10-4, C10-4, B20-4, C20-4, C20-6, B30-4, C30-4, C30-6	7	12	10	24
B40-4, B40-6, C40-4, C40-6, B50-4	10	16	10	36
B60-4, C55-4, C55, DR4, C60-4, C60-6	12	24	12	36
B70-4, B70-6, C70-4	12	24	19	40
B30-4, B30-6, C80-4, C90-6	12	24	20	40
TH415-4, TH415-6, TH515-4, TH515-6, TH420-4, TH420-6, TH520-4, TH520-6	24	32	36	50
B5-4x4, B6-4x4, B5-6x4	5	5	14	25
B5-6x6, B6-6x6	5	5	5½	25
B6-6x4	6	5	5½	25
LD1, LD14	5	5	2½	25
C5A4, C5B4, CSA-4, CSB-4, C5-4, C6-4	5	5	5½	25
C5-6, C6-6 (1937)	5	5	5½	25
E5-4, E6-4, E5-COE-4 (1938)	5	5	5½	25
E5-6, E6-6 (1938)	5	5	5½	25
LD3-4, OOT2-4, OT2-4, LD4-4, LLD4-4, OT3-4, OOT3-4	5	5	2½	22

CAPACITIES (CONTINUED FROM PAGE 47)

TRUCK MAKE AND MODEL	LUBRICANT CAPACITY			Cooling System Capacity, Quarts
	Engine Quarts	Transmission Pints	Rear Axle Pints	
MARMON-HERR.—Con'd				
F5-4, FF5-4, F5-COE, FF5-COE-4, F6-4, FF6-4, H5-4, HH5-4, H6-4, HH6-4	5	5	5½	24
F5-6, FF5-6, F6-6, FF6-6, H5-6, HH5-6, H6-6, HH6-6	5	5	5½	24
J5-4, J6-4, JJ5-4, JJ6-4, JJ5-6, JJ6-6	5	5	5½	24
LD5-4, LLD5-4, OT4-4, OOT4-4	5	5	2½	24
LD6-4, LD6P-4, LLD6-4, LLD6P-4, OT5-4, OOT5-4 (1942-43)	5	5	2½	22
6LD6-4, 6LD6P-4, 6OT5-4 (1942-43)	5	5	2½	17
M5-4, MM5-4, M6-4, MM6-4, M5-6, MM5-6, M6-6, MM6-6, M5-COE-4, MM5-COE-4, M6-COE-4, MM6-COE-4, M5-COE-6, MM5-COE-6, M6-COE-6, MM6-COE-6 (1942-43)	5	5	5½	23
6M5-4, 6MM5-4, 6M6-4, 6MM6-4, 6M5-6, 6MM5-6, 6M6-6, 6MM6-6, 6M5-COE-4, 6MM5-COE-4, 6M6-COE-4, 6MM6-COE-4, 6M5-COE-6, 6MM5-COE-6, 6M6-COE-6 (1942-43)	5	5	5½	17
DSD-100-4, DSD-200-4	6	10	10	24
DSD-200-6, DSD-300-4, DSD-300-6	6	12	10	24
DSD-400-4, DSD-400-6	7	16	15	36
DSD-500-4, DSD-500-6	7	17	10	32
DSD-550-4, DSD-550-DR4	10	24	10	38
DSD-600-4, DSD-600-6, DSD-700-4, DSD-700-6	10	24	19	38
DSD-800-4, DSD-800-6	10	24	20	38
DSD-900-4, DSD-900-6, DSD-1000-4, DSD-1000-6	14	22	24	69
DVL-1 (1946) (Note 1)	4½	3	3	12
MH440-4 (1946) (Note 2)	8	16	15	32
MH555-4 (1946) (Note 3)	9	24	21	36
OSHKOSH				
WLD	7	23½	10½	28
WLX	7	23½	10½	28
JCB	6	11	8½	22
JD	6	11	8½	22
FC-35	10	30½	12	40
FS, FB, FC, FB-35	10	30½	12	40
B3S	7	23½	10	28
B3D	7	23½	11	28
C3S	10	30½	10	40
C3D	10	30½	12	40
R3S	10	30½	19	40
FD	10	30½	25	40
W100	8	10 p	12	25
W200	8	10 p	15	25
W300, W304, W307	8	18 p	12	36
W400	11	21 p	14	44
W500	11	21 p	15	44
W600	11	21 p	15	46
W700	11	21 p	15	46
W703, W705	14	21 p	15	46
W800	14	21 p	18	46
W900, W906	16	19 q	18	40
BG3, GD, GDC	16	19 n	21	62
W2300	8	18	15	36
PETERBILT				
344DT (1944-46)	20	18	14 ea	60
345DT, 354DT, 355DT (1944-46)	20	18	20 ea	60
270D (1944-46)	20	18	26	60
REO				
4H5, 4J5, 4K5 (1936-37)	9	12	15	31
450 (1937)	4	2¼	2	12
475 (1937)	4	2¼	3½	12
650 (1937)	5	2½	2	14
675 (1937)	5	2½	3½	14
1A4, 1C4 (1937)	5	6	9	15½
1A4H, 1C4H, 1B4, 1D4 (1937)	6	6	9	19
1B4H, 1D4H, 2B4, 2D4 (1937)	6	6	9	19½
2H5, 2J5 (1937)	6	12	9	19½
3H5, 3J5, 3K5, 3HR5, 3JR5, 3KR5 (1937)	6	12	15	25
450, 450L	4	2¼	2	12
475, 475L	4	2¼	3½	12
650, 650L	5	2¼	2	14
675, 675L	5	2¼	3½	14
1A4, 1C4	6	6	9	15½
1A4C, 1C4H, 1B4, 1D4	6	6	9	19
1B4H, 1D4H, 1BM7, 2BM7, 2B4, 2D4, 2L7M	6	6	9	19½
REO—Con'd				
2J5, 2H5, 2L4H, 2L7MH	6	12	9	19½
1L5	6	6	9	15
3H5, 3J5, 3K5, 3HR5, 3JR5, 3KR5	6	12	15	25
4H5, 4J5, 4K5	9	(i)	15	....
3L6H	9	12	15	31
4D19	5	8	8	17
6D19	6	8	8	17
D20	6	8	12	17
23-H (1942)	8	12	12	19
25 (1942)	8	20	16	18
27 (1942)	8	24	14	27
22 (1942)	8	11	12	19
21 (1942)	8	11	12	18
27VXS (1944-45)	8	24	24	30
19, 20 (1941-46)	8	8	8	17
21 (1941-46)	8	8	12	17
22 (1941-46)	8	11	12	18
23 (1941-46)	8	12	15	19
25VBS (1944-46)	8	20w	24	30
25VXS (1944-46)	8	20	24	30
23XHS (1945)	8	20	8	28
STERLING				
FB50 Del. (1937-38)	8	6	8	22
FB60 Del. (1937-38)	8	7	8	22
FB70 Del. (1937)	8	8	14	22
FC90 (1937-38)	8	9	18	22
FBT130	8	11	14	23
FB-80 (1937)	8	24	15	32
FD90 (1937)	8	24	11	32
FD97 (1937)	10	12	15	36
FC135 (1937)	10	12	18	36
HC140 (1937)	10	12	18	44
FD115 (1937)	10	12	18	36
FC100 (1937)	8	12	13	34
HC170	14	14	20	48
HCS210 (1937-38)	14	14	12	48
FB70 (1938)	8	8	11	22
FB80 (1938)	8	16	12	32
FD90 (1938)	8	16	11	32
FD97 (1938)	8	12	16	36
FC135 (1938)	8	12	18	36
HC140 (1938)	8	12	18	44
FD115 (1938)	8	12	26	36
FC100 (1938)	8	12	18	36
HC200, HC185 (1938)	14	14	20	43
HC250 (1938)	14	(k)	20	46
FBT152 (1938)	8	16	12	32
FWS152 (1938)	8	16	20	32
FDS180 (1938)	8	12	24	36
MB75, MD75 (1939-42)	8	12	11	34
MS75 (1939-41)	8	12	20	34
MB85, MD85 (1939-42)	8	12	12	34
JB90, JD90	8	16	12	27
MB90, MD90, HBT128 (1939-41)	8	16	12	34
HD110 (1939-42)	10	m	16	36
JD135 (1939-42)	10	24	26	32
JD137 (1939-42)	10	24	16	32
HD165 (1939-42)	10	24	20	36
HD175R (1939-42)	14	22	20	40
JC137	10	24	14 n	32
JC145	10	24	16 n	32
HC185 (1939-42)	14	22	20 n	40
HC200 (1939-42)	14	22	22 n	40
HC250	14	22	22 n	42
HWS235S, HDS235S (1939-42)	10	24	20 ea	36
HWS128, HDS128 (1939-42)	10	24	10 n	....
HCS225	10	24	10 n	....
HCS255, HCS285, HCS300, (1939-42)	14	22	10 n	....
HD105 (1939-46)	8	16	16	34
HD115 (1939-46)	10	m	26	36
HD145	10	24	16	36
HC105 (1939-46)	8	16	14 n	34
HC115 (1939-46)	10	m	14 n	36
HC147, HC165 (1939-46)	10	24	14 n	36
HC145, HC156 (1939-46)	10	24	16 n	36
HC175 (1939-46)	8	16	20 n	36
JWS160, JDS160 (1939-46)	10	24	10	34
STEWART				
40A, 60A (1938)	4	6	3	15
45A, 45AL, 45AS (1938)	6	6	2	18
47A, 50A (1938)	8	6	5	24
50AS (1938)	8	6	10	24
49A (1938)	9	6	8	26
51A (1938)	9	6	8	24½
61A (1938)	4	6	8	18
STEWART—Cont'd				
58A (1938)	8	20	6	26
59A (1938)	8	20	10	26
38-6 (1938)	8	20	10	26
31X (1938)	8	26	16	31
49A (1940-42)	9	12	20	26
58A (1940-42)	8	16	22	26
59A (1940-42)	8	16	24	26
38A (1940-42)	8	18	16	26
STUDEBAKER				
J5 (1937)	6	2½	3	13
J15, J15M, J15B (1937)	6	6	8	16
J20, J20M, J20B (1937)	6	6	10	21
J25, J25M, J25B (1937)	6	12	14	21
J30, J30M (1937)	7	18	12	23
K5 (1939-40), L5 (1939)	5½	2½	3	14
K10 (1939-40)	5½	3	4	16
K15, K15B, K15M (1939-40)	5½	6	8	16
K20, K20M, K20MB (1939-40)	6	6	10	21
K25, K25M, K25MB (1939-40)	6	12	14	21
K30, K30M (1939-40)	7	18	12	23
Coupe-express (1942)	5	2½	3	10½
Standard (1942)	5	6	6⅛	10½
Heavy-duty (1942)	6	6	7	13
M15 (1945)	5	6	7	10½
M5 (1946)	5	2½	3	10½
M15A (1946)	5	6	6⅛	10½
M16 (1946)	6	6	7	13
WALTER				
FC, FCK (1943-45)	10	25	5	34
FGB, FGR (1943-45)	18	32	8	52
FKM (1943-45)	10	18	5	34
FN, FZM (1943-45)	8	18	5	34
WARD LA FRANCE				
D-1	8	16	16	36
D-1B	10	24	16	56
D-1C	8	16	34	36
D-2, D-3, D-3 Spec.	14	24	34	60
WHITE				
500	6	7	8	22
510, 512	6	7	8	18
618	14	22	8	20
620	22	8	8	32
620K	22	8	8	30
621	22	8	10	32
621K, 51AS, 63, 630, 630K, 631, 631K	22	8	10	30
640, 641 (1AB Engine)	28	12	10	30
640, 640K, 641 (5A Engine)	22	40	10	30
641K, 642, 643 (5A Engine)	22	40	12	30
642, 643 (1AB Engine)	28	12	12	30
642SW310	28	12	17	30
642SW320	22	40	17	30
643SW410	28	12	22	30
643SW420	22	40	22	30
65K	22	8	10	34
691	22	40	12	31
700, 700H	12	7	8	23
700K	12	7	14	23
701, 702	6	4	12	17
703, 704, 705	12	5½	10	23
704K, 708	12	12	8	23
707	6	4	14	17
709 (11A Engine)	12	5½	8	23
709, 710 (13A & 16A Engine)	12	12	8	25
710 (30A Engine)	12	12	8	23
712 (9A Engine)	9½	22	14	25
712 (16A Engine)	12	12	8	25
718 (16A Engine)	12	12	12	25
718 (30A Engine)	12	12	20	23
720, 720T, 722	18	26	22	32
750	12	20	22	24
750T	12	20	8	24
800, 802	6	8	8	18
804, 806	6	8	8	22
805	12	8	10	23
809, 810, 812	12	12	8	25
818 (16A Engine)	12	12	12	25
818 (30A Engine)	12	12	20	25
820, 822	18	24	22	32
850	12	20	22	25
904	12	5½	8 ea	23
White Horse (32A Engine)	3½	3	6	....
White Horse (35A Engine)	5	3	6	....
WA14	12	8½	13	23
WA114	12	8½	18	23
WA16	12	10	13	23
WA18	12	5½	13	23
WA118	12	5½	18	23
WA20, WA120	12	13	17	23
WA22, WA122	12	20	8	24½
WA26, WA126, WA34, WA134	12	20	22	24½
WA2064	12	13	8 ea	23
WA2264, WA12064	12	20	12 ea	24½
WILLYS				
38, 48, 4-40, 4-40P	4	1	1½	11
441, 441P, 442, 442P	4	1	2	12
CJ-2A (Universal Jeep)	5	3	2½	11

BATTERY DATA

GUIDE TO REPLACEMENT



DUE to the shortage of lead, the supply of storage batteries continues below civilian requirements. To conserve existing stocks, fleetmen must check batteries more frequently, add water as soon as it drops below the recommended level, and recharge when the specific gravity drops below 1225. The following Table will be found very useful when replacements are sought.

TRUCK MAKE AND MODEL	BATTERY		
	Amp. Hr. Capacity	Number of Plates	Terminal Grounded
AUTOCAR			
A, B, UA, UB, C10, U10, C20, U20, C30, U30	118	15	P
RM, RL, D, UD, UDD	135	17	P
DF, N, NF, DH, DS	152	19	P
UDF, UN, UNF, US	152	19	P
UT, 5UTR, 6X2UT, T, C, 6X2UT	135*	17	P
RMT, 1TR, 6X2RL, 1UTR, 6X2UD	118*	15	P
2TR, 3TR, 4TR	135*	17	P
2UTR, 3UTR, 4UTR	135*	17	P
RLD, DP, C40, C40D, U40, U40D	135	17	P
6X2DF, 6X2NF, 6X4DF	135*	17	P
6X2T, 6X4TO, 6X4TD, 6X4TC, 6X4S	135*	17	P
6X2UN, 6X2UNF, 6X4UTO, 6X4UTD	135*	17	P
4X4DF, 4X4N, 4X4NF	152	19	P
C10, U10, C20, U20, C30, U30	118	15	P
C10T, U10T, C20T, U20T, C30T, U30T	101*	13	P
DC10, DC10T, DU10, DU10T, DC20, DC20T, DU20, DU20T	135**	17	P
C40, U40, C40D, U40D, C50D	135	17	P
C40T, U40T, C4062, C4064, U4064, C50, C50T, C5064, U50, U50T	118*	15	P
DC50T	237*	25	P
All others (1939-46) (6 volt)	152	19	P
All others (1939-46) (12 volt)	135*	17	P
All others (1939-46) (24 volt)	152**	19	P
BROCKWAY			
78, 83, 88, 88W, 92, 94	118	15	P
88WH, 112, 123, 146, 146W, 147, 152, 152W, 153, 154, 154W, 156, 162, 166	135	17	P
160X, 165X	135	17	P
170X, 175X, 195X, 223X	152	19	P
240X, 280X, 280XW	118*	15	P
CHEVROLET			
All Trucks (1935-36)	90	15	N
All Trucks (1937-38)	94	15	N
All Trucks (1939)	95	15	N
All Trucks (1940-46)	100	15	N
CORBITT			
12B, 13B, F12, 17B, F14, 14BT, 21B	101	13	P
26D, F23, F27, F35, 18BT, 22BT, 27BT	101	13	P
F18	101	17	P
18TG, 22TG, 18BG, 22BG	100*	13	P
25TG, 23TG, 25BG, 23BG	135*	19	P
22TD, 25TD, 27TD, 28TD, 25BD	230**	23	P
22FG	135	19	P
18BD	135**	19	P
DIAMOND T			
201 (Standard)	95	15	P
201 (Deluxe), 201C, 306, 306SC, 404, 404C, 404SC	100	15	P
406	110	17	P
509, 509C, 612, 612C, 614, 614C	152	19	P
702, 702C, 805, 805C, 806, 806C	152	19	P
900	200	25	P
DODGE			
RC, RD, TC, TD, VC, WC Series	90	13	P
RE, VD, TE, WD Series	95	15	P
RF, VF, WF, WFM Series	105	15	P
RG, RH, TG, TH, VG, VH, WG, WH, WGM, WHM Series	119	15	P
RL, RK, RO, RP, TL, TK, VL, VK, WL, WK Series	136	17	P
TLD, TKD, VLD, VKD	153**	19	P
WLD, WKD	136**	17	P
FEDERAL			
7, 8, 9, 10, 11, 11H, 12, 14	100	13	P
15, 15H, 18H, 20H, 75	100	13	P
16, 17, 18, 18M, 20, 76, 77, 80	118	15	P
18, 20 (Late 1941)	135	17	P
25, 29, 29M, 25H, 29H, 35, 45	135	17	P
40, 40DR, 50, 50H, 55	135	17	P
62, 63, 65, 66 (12-volt)	135*	17	P
C7, C7W, C8, C8W, C8H	135	17	P
75, 80, 75H, 80H	100	13	P
85, 89, 85H, 89H, 90, 92, 94	135	17	P
45M, 55M, 60MA (1944-45)	135	19	P
FORD			
(1939)	100	17	P
(1940-46)	120	17	P
FWD			
CU, CUA, HA, HG, HH6, HM, HR, HS, T26, T30, T32	153	19	P
M6, M6X6, M7, M10, MJ5, MJ6, MJ6X6, SU, SUA, T40, T45, T60, YU, YUA	153*	19	P
M6X6D, M7D, M10D (12-volt)	204*	25	P
GMC (General Motors Truck)			
Models CC, CF, AC, AF 100 thru 450	100	15	P
Models AC, AF, ACR, AFR 500 thru 890	110	17	P
HUDSON			
58	96	51	P
HUG			
98, 99, 99S, 44-4, 45-4, 46-4	153	19	N
D42, D43, D43L, D98, D99, D99S, 42W, 87W, CB8P	153	19	N
15W, 19W, 83W, CB6P, CB7P	105	19	N
INTERNATIONAL			
K1, K2, K3, K4, KS4, K5, KS5, K5COE, KS5COE	105	15	P
K6, KS6, K6T, KS6T, K6E, K7, KR7, KS7, K7COE, KS7COE	127	15	P
K8, KS8, K8COE, KS8COE, K8T, KR8, KR8COE, KR8T, KS8T, K8F, K10, KR10, KS10, KR11, KS11, KR11COE, KS11COE, KR11T, KS11T, K11F, KR12F	145	17	P
KENWORTH			
505 to 512, 514, 515, 516, 519 to 524, 548, 550 to 556 (1941-45)	200	21	P
513, 533 to 540 (1941-42)	135	19	P
525 to 528, 541 to 546 (1941-45)	150	21	P
All models (1946)	168†	21	P
LA FRANCE-REPUBLIC			
All models (1941-42)	158	23	P
MARMON HERRINGTON			
E, F, FF, H, HH, J, JJ, LD, LLD, M, MM, OT, OOT Series Models	100	17	P
C-10-4, C20-4, C30-4, DSD100-4, DSD-200-4, DSD200-6, DSD300-4, DSD-300-6	120	17	P
C40-4, C50-4, DSD400-4, DSD400-6, DSD500-4 DSD500-6	141	17	P
C55-4, C55DR-4, C60-4, C60-6, C70-4, C70-6, DSD500-4, DSD550-DR4, DSD600-4, DSD600-6, DSD700-4, DSD700-6	116	15	P
C80-4, C80-6, DSD800-4, DSD800-6	120	13	P
DSD900-4, DSD900-6, DSD1000-4, DSD1000-6	138	15	P
DVL1 (1946)	100	15	P
MH440-4 (1946)	160	17	P
MH555-4 (1946)	140	13	P
OSHKOSH			
W900, W906	204	25	P
All Other Models	153	17	P
PETERBILT			
All Models (1944-46)	152	19	P
REO			
450, 450L, 475, 475L, 650, 650L, 675, 675L, 1A4, 1C4	90	13	N
1A4H, 1C4H, 1B7M, 2B7M	90	13	N
1B4, 1D4, 1B4H, 1D4H, 2B4, 2D4, 2J5, 2H5, 1L5	90	13	N
2LM7, 2LMH7	240	25	N
	140	15	N
2L4, 2L4H, 2LC4	240	25	N
	140	15	N
19, 20	90	13	P
21, 22, 23	135	17	P
4D19	204	25	P
6D19, D20	272*	33	P
23H, 25, 25V	170	21	P
27, 27V	140	15	P
STERLING			
MB75, MB85, MC87, MB90, MC96, JB90, HD105, HD110, JD135, JD137, HD145, HD165, HC105, HC115, JC115, JC137, HC144, JC145, HC145, HC147, HC156, HC165	158	23	P
HD175, HC175	170*	21	P
STEWART			
40A, 60A, 61A, 62A, 47A, 50A	117	15	P
38A, 49A, 51A, 58A, 59A	133	17	P
STUDEBAKER			
K5, L5, K10, K15, K15M	105	15	P
K20, K20M, K25, K25M	136	17	P
K20D	136**	17	P
K30, K30M	153	19	P
All Models (1941-42), M15 (1945)	90	13	P
All Models (1946)	90	15	P
WALTER			
FN, FZM (1943-45)	160	17	P
FC, FCK, FKM (12-volt) (1943-45)	120*	15	P
FGB, FGR (12-volt) (1943-45)	160*	17	P
WARD LA FRANCE			
All Models	152	19	P
WHITE			
700, 704, 510	100	15	P
704K, 708, 709, 710, 718, 750, 750T, 800, 802	119	15	P
750T	136	17	P
720, 720T, 722, 820 (12-volt)	120	13	P
805, 809, 810, 812, 818	117	15	P
WA14, WA18, WA20, WA22, WA26, WA34, WA114, WA118, WA120, WA122, WA126, WA134, WA2064, WA2264	119	15	P
White Horse	120	17	P
WILLYS			
C-J-2A (Universal Jeep)	100	15	N
All Other Models	80	13	N

ABBREVIATIONS:

*—Each for 2 units. **—Each for 4 units.

†—Gasoline Models 2 units; diesel models 4 units

‡—12 Volt.

N—Negative.

P—Positive.

TRUCK LUBRICATION Specifications

EVERYBODY knows that trucks have to be lubricated periodically and practically every fleet operator is sold on the idea of using good lubricants. There is one factor, however, that still is not given the proper consideration. This is the matter of types of lubricants—lubricants designed for a specific purpose.

"Give it a shot of grease" or "Squirt some oil here," still are the standard instructions given the lube man.

If the only required property of a lubricant was the ability to eliminate metal-to-metal contact—friction—then lubrication would not be a problem. The requirements are not so simple.

Lubrication requirements are engineered into a vehicle. They vary with each truck manufacturer—often with each model produced by a single truck manufacturer. This is as it should be, because the operating requirements of the different models may differ from light-duty, short run, intermittent service to the grueling conditions of the other extreme.

To insure long, trouble-free service of their trucks, fleet operators should insist that correct lubricants are used in their vehicles. The data found in the accompanying Table can be accepted as correct because it is based on information supplied by the particular truck manufacturers. Their interest is not one of brands but of correct types, assuming that the fleet operator will, for his own benefit, insist upon good quality.

ABBREVIATIONS

*—Fibre Grease for pin and bushing type; 160 for needle bearing type
**—Use 90EP below 30°; 140EP above 30° on all 2-speed axles
***—Use 160EP on 5-speed transmissions
†—10% kerosene in extremely low temperatures
††—Use 40 for high speed above 90°
§—Use 50 for high speed above 80°
‖—Use 40 in 672 and 707 Diesel engines
‡—Use 90EP with dual performance axles. Do not use EP in double reduction axles

a—Double reduction and 2-speed axles 110EP
b—Double reduction and 2-speed axles 90EP (140EP at temperatures above 100°)
A—Also front axle
C—Use 90EP in two-speed axles on Models 147, 154 156
d—If equipped with steering column shift use 90
e—If equipped with steering column shift use 80
f—Under severe conditions use 140 Hyp
g—Use 80% 90, 20% 10W or straight 80 gear lube below −10°

h—Chassis lube
j—Straight mineral oil
k—If equipped with overdrive use only 90 mineral gear lube or 50 engine oil, summer and winter
p—Front axle shaft U-joint: FG
Propeller shaft U-joint: NLGI #0, winter; NLGI #1, summer.
q—Use 80 Hyp below zero
EP—Extreme pressure
FG—Fibre Grease
H—Heavy duty

Hyp—Truck-type hypoid lubricant
Kero—Kerosene
L—Light duty
N—Normal duty
SS—Cylinder oil sodium soap grease
(W)—Winter
X—Aviation grade engine oil with anti-foam characteristics
M—Mild
(S)—Summer

TRUCK MAKE AND MODEL	ENGINE			TRANSMISSION		REAR AXLE		STEERING GEAR		UNIVERSAL JOINT
	Viscosity and Temperature Range			Summer	Winter	Summer	Winter	Summer	Winter	
AUTOCAR—All Models (1940-46)	(S)30-40	(W)10-20		140	90	140	90	140	90	140-90
BROCKWAY—78, 83, 88, 92, 94, 112, 128, 146, 147 (1935-44)	N40 above 32°	H40 above 32°	30 below 32°	160	110	160(C)	110(C)	160	110	140
152, 153, 154, 156, 162, 166, 170X, 175X, 195X, 220X, 240X, 260X (1934-44)	N40 above 32°	H40 or 50 above 32°	30 below 32°	160	110	160(C)	110(C)	160	110	140
88W (1944-45); 88WH, 146W, 152, 154W 1944-46); 154WH (1946)	N40 above 32°	H40 above 32°	30 below 32°	90EP	90EP	90EP	90EP	160	110	140
260XW (1944-46)	N30 above 32°	H30 above 32°	30 below 32°	90EP	90EP	90EP	90EP	160	110	140
CHEVROLET—All Models (1935)	20 above 75° 20W@32° to 75°	10W@−15° to 32°	90% 10W, 10% Kero below −15°	160	90†	160	90†			160-90†
All Models (1936-37)	30 above 50° 20@30° to 80°	20W@10° to 80° 10W@10° to 45°	90% 10W, 10% Kero below 20°	160	90†	160	90†			160-90†
All Models (1938)	30 above 50° 20@30° to 50°	20W@10° to 30° 10W@−10° to 10°	90% 10W, 10% Kero below −10°	90	90†	90 ¾-Ton 90EP	90 ¾-Ton 90EP			90
All Models (1939)	20 or 20W above 32°	20W@10° to 30° 10W@ −10° to 10°	90% 10W, 10% Kero below −10°	90	90	90 ¾-Ton 90EP	90 ¾-Ton 90EP			90
All Models (1940-46)	20 or 20W above 32°	20W@10° to 30° 10W@ −10° to 10°	90% 10W, 10% Kero below −10°	90	90	90Hyp	90Hyp			90
CORBITT—All Models (1934-38)	(S)40	(W)30		110	90	168	110	160	160	160
All Models (1939-46)	(S)40	(W)30		160	90	160	90	160	160	160

(TURN TO NEXT PAGE, PLEASE)

Truck Lubrication Specifications . .

(Continued from page 51)

TRUCK MAKE AND MODEL	ENGINE			TRANSMISSION		REAR AXLE		STEERING GEAR		UNIVERSAL JOINT
	Viscosity and Temperature Range			Summer	Winter	Summer	Winter	Summer	Winter	
DIAMOND T—211, 211A, 220, 226, 227, 242, 243, 262, 311B, 311C, 312, 351B, 351C, 352, 411B, 412B, 511B, 512B (1934-35)	40 above 40°	30 below 40°		160	90	**160	** 90	160	160	160
311DR, 351DR, 411DR, 412DR, 511DR, 512DR (1935-36)	40 above 40°	30 below 40°		160	90	**110EP	**110EP	160	160	160
228, 412B, 512B, 80, 212A, 212B, 221, 244, 313, 320, 353, 360 (1936-37)	40 above 40°	30 below 40°		160	90	**160	** 90	160	160	160
412DR, 512DR (1936-37)	40 above 40°	30 below 40°		160	90	*110EP	**110EP	160	160	160
All Models (1938-39)	40 above 40°	30 below 40°		160	90	160EPa	90EPa	160EP	110EP	160EP
All Models (1940)	40 above 40°	30 below 40°		140	90	140EPb	90EPb	140EP	140EP	140EP
702, 805, 805C, 806C, 806H, 806W, 900 (1941-45)	40 above 40°	30 below 40°		140	90	140EPb	140EPb	140EP	140EP	140
All Other Models (1941-45)	40 above 40°	30 below 40°		140	90	140EPb	90EPb	140EP	140EP	140
DODGE—LC				140	90	140	90	90	90	FG
LE, LF, K-50V, K-60V, ME, MF, ML, MK, RE, RF, RL, RK, TE, TF, TL, TK, VL, VK				140EP	90EP	140EP	90EP	90	90	140
LG, LH, MG, MH, RG, RH				140EP	90EP	140EP	90EP	90	90	140
MC, RC, TC, TD-15, VC, VD	40 above 90°	20W@ 10° to 32°	90% 10W, 10%	140	90	90Hyp	90Hyp	90	90	FG
MD, RD, TD, TD-20, TD-21	30@30° to 90°	10W@ -10° to 10°	Kero below -10°	140	90	140EP	90EP	90	90	FG
TG, TH, VG, VH, VF, VM, WG, WGM				140EP	90EP	90Hyp	90Hyp	90	90	140
WL, WK, WLD, WKD				140EP	140EP	90EP	90EP	90	90	140
WC, WD, WDX	20 above 32°	10W@ -10° to 10°	90% 10W, 10%	140	90g	90Hyp	90Hypg	90	90	140h
	20W@10° to 32°		Kero below -10°							
WF, WFM, WH, WHM	30 above 32°	10W@ -10° to 10°	90% 10W, 10%	140	90g	90Hyp	90Hypg	90	90	140h
WFA, WFMA, WHA, WHMA	20W@10° to 32°		Kero below -10	140	90g	140Hyp	90Hypg	90	90	140h
FEDERAL—15, 18, 20, 25, T10B, T10W (1935)	(S)30	(W)30		160	160	160	160			160
28, 29, 30, 40, 40DR, 50, C7, C8, X8, X8R (1935)	(S)30	(W)30		200	200	160	160			160
All (1936-37)	(S)50	(M)30	(W)20	160	160	160***	160***			160
9 (1938); 7 (1940)	N30, H40@50° to 110°	N20, H30@15° to 50°	N10, H20@ -20° to 15°	160	90	160	90			160
C7, C8, 40, 50, 40F, 50F, 62, 63, 65, 66 (1939)	N40, H50@50° to 110°	N30, H40@15° to 50°	20@ -20° to 15°	160	90	160	90			160
40, 50, 50H, 62, 63, 66, 65, (1940-42)	N40, H50@50° to 110°	N30, H40@15° to 50°	N20, H30@ -20° to 15°	160	90	160	90			160
8, 10, 11, 11K, 12, 12K, 14, 14K, 15, 15K, 16, 17, 18, 18K, 20, 20K, 25, 25K, 29, 29H, 29K, 35, 45, 55, 75, 75K, 76, 77, 80, 80K, 85, 85K, 89, 89H, 89K, 90, 92, 94, 94H (1939-42)	N40, H50@50° to 110°	30@15° to 50°	20@ -20° to 15°	160	90	160	90			160
18M, 29M, 45M, 55M, 60M, 60MA (1944-45)	N40, H50@50° to 110°	30@ 15° to 50°	20@ -20° to 15°	160	90	160	90			160
FORD—All (1932-38)	50 above 90°	30@20° to 65°	20W above 10°	140	90 or 110	140EP	90EP or 110EP	160	90 or 110	SS
	40@30° to 110°		10W above -10°							
All (1939-40)	40 above 90°	30 above 32°	90% 10W, 10%	140(d)	90(e)	140EP(M)	90EP(M)	90	90	SS
All (1941-46)	40 above 90°	30 above 32°	Kero below -10°	140(d)	90(e)	140EP(M)	90EP(M)	90	90	140
FWD—HS, T26, HA, T30	(S)L30, H40	(MW)L20, H30	(W)L10W, H20W	140	90	90EP	80EP	140	90	140–90
All Others	(S)L40, H50	(MW)L30, H40	(W)L20W, H30W	140	90	90EP	80EP	140	90	140–90
GMC (General Motors Truck)—Models CC-100 to CC-450, CF-300 to CF-450, AC-100 to AC-450, AF-240 to AF-460	20 above 32°	10W below 32°		50X	50X	90Hyp(f)	90Hyp(q)	140(3%SS)	90(3% SS)	140–90(j)
Models AC-500 to AC-890, AF-500 to AF-850, ACR-520 to ACR-750, AFR-520, AFR-720	30 above 32°	10W below 32°		50X	50X	90Hyp(f)	90Hyp(q)	140(3%SS)	90(3% SS)	140–90(j)
HUDSON—58 (1946)	30 above 90°	20W@ 10° to 32°	90% 10W, 10%	90EP	80EP	90EP	90EP	90EP	90EP	FG
	20@ 32° to 90°	10W@ -10° to 10°	Kero below -10°							
HUG—83W, 85W, D92U, D98, D99, D99S, 50-6	40@50° to 110°	30@15° to 50°	20W@-20° to 16°	140	90	140	90	160	90	160
87W, 92U, 98, 44-4, 45-4, 99, 99S, 46-4, CB6P, CB7P, CB8P	50@50° to 110°	40@15° to 50°	30@-20° to 15°	140	90	140	90	160	90	160
INTERNATIONAL—All Models	(S)N30 or 40	30@32° to 90°	10W@-10° to 10°	140	90	140**	90**	140	90	140
	(S)H40 or 50	20W@10° to 32°								
KENWORTH—146, 146SW, 146SBT (1936-37)	(S)30	(W)20		140	90	140	90	140	140	140
241A, D241C, 346C (1936-37)	(S)50	(W)30		140	90	140	90	140	140	140
All Others (1936-37)	(S)40	(W)30		140	90	140	90	140	140	140
H30 (1938)	50 above 32°	30@0° to 32°		140	90	140	90	140	90	140
505 to 512, 514 to 516, 519 to 524, 543 to 546, 548 to 550, 552 (1938-41)	50 above 90°	40@60° to 90°	30@10° to 60°	140	90	140	90	140	90	140
			20W@-10° to 10°							
513, 536, 537, 538 (1938-42)	40 above 75°	30@32° to 75°	20W@ below 32°	140	90	140	90	140	90	140
525 to 528, 539, 540, 541, 542 (1938-41)	40 above 50°	30@5° to 50°	20W@0° to 5°	140	90	140	90	140	90	140
529, 530, 531, 532 (1938-39)	40 above 50°	30@ 5° to 50°	20W@0° to 5°	140	90	140	90	140	140	140
529, 530, 531 (1942)	50 above 75°	40@ 32° to 75°	30 below 32°	140	90	140	90	140	140	140
547 (1938-42)	50 above 30°	30@ below 0° to 32°		140	90	140	90	140	90	140
551, 553, 554, 555, 556 (1938-42)	50 above 75°	40@ 32° to 75°	30@ below 32°	140	90	140	90	140	90	140
521 (1942-46)	(S)30	(W)20		70	70	140EP	90EP	140	90	140
523, 524, 548, 552, 584 (1942-46) (Cummins engine)	(S)30	(W)20		70	70	140	90	140	90	140
524, 525, 528, 532, 548 (1942-46) (Buda, Hall-Scott or Waukesha engines)	(S)40	(W)30		70	70	140	90	140	90	140
585, 587 (1942-46)	(S)40	(W)30		70	70	140EP	90EP	140	90	140

TRUCK MAKE AND MODEL	ENGINE Viscosity and Temperature Range			TRANSMISSION Summer	TRANSMISSION Winter	REAR AXLE Summer	REAR AXLE Winter	STEERING GEAR Summer	STEERING GEAR Winter	UNIVERSAL JOINT
LA FRANCE REPUBLIC—C3, D4, E4 (1934-35)	40@32° to 90°	30@0° to 32°	20W@–15° to 0°	140	90	140	90	140	140	140
F4, H6, K1, M4, MT4 (1934-38)	50@32° to 90°	30@0° to 32°	20W@–15° to 0°	140	90	140	90	140	140	140
EH5B, EH5D, EH6B, EH6D (gasoline engines)	40@50° to 110°	30@15° to 50°	20W@–20° to 15°	140	90	140	90	140	140	140
FH5B, FH5D, HH7, KH2, MH5 (gasoline engines)	50@50° to 110°	40@15° to 50°	30@–12° to 15°	140	90	140	90	140	140	140
MARMON-HERRINGTON—Ford Conversions	(S)40	(M)30	(W)20 (10 below 10°)	140	90	140A	90A	90EP	90EP	140
DVL-1 (1946)	(S)30	(M)20	(W)10	90	80	140A	90A	90	90	140
All Other Models	(S)50	(M)40	(W)30	140	90	140A	90A	140	90	140
OSHKOSH—All Models (1936-45)	40 above 32°	30@0° to 32°	20 below 0°	140	90	250	140			140
PETERBILT—All Models (1944-45)	50 above 90°	40@60° to 90°	30@10° to 60°	140	90	140	90	140	90	140
REO—All Models (1934-39)	30 above 18°	20W@0° to 18°	10W below 0°	140	90	140	90	90	90	140
All Gasoline Models (1940-46) Except double reduction axles	30 above 32°	20W@0° to 32°	10W below 0°	140	90	140	90	90	90	...
All Gasoline Models (1940-46) With double reduction axles	30 above 32°	20W@0° to 32°	10W below 0°	140	90	90	90	90	90	...
All Diesel Models (1941-44)	40 above 50°	20@0° to 50°	20 below 0°	140	90	140	90	90	90	140
STERLING—FB50 De Luxe, FB60 De Luxe, FB70 De Luxe (1934-38)	40@32° to 90°	30@0° to 32°	20W@15° to 0°	140	90	140	90	140	140	140
FB80, FD90, FC90 (1934-38)	50@32° to 90°	30@0° to 32°	20W@0° to 15°	140	90	140	90	90	90	140
FD97, FD115, FC100, FC135, HC140, HC170 (1934-38)	50@32° to 90°	30@0° to 32°	20W@0° to 15°	140	90	140	90	140	140	140
FBT130 (1934-35)	40@32° to 90°	30@0° to 32°	20W@0° to 15°	140	90	140	90	90	90	140
FBT152, FDT180, FCT180, FDT200, FCT200, HCS210 (1934-38)	50@32° to 90°	30@0° to 32°	20W@0° to 15°	140	90	140	90	140	140	140
MB75, MD75, MS75, MB85, MD85 (1939-42) (gasoline)	40@50° to 110°	30@15° to 50°	20W@–20° to 15°	140	90	140	90	110EP	110EP	140
MB90, MD90, HC175, HC200, HC185, HC250, HCS255, HCS285, HCS300(1939-46)(gas.) JB90, JD90, HD105, HD110, HD115, HD135, HD137, HD145, HD165, HD175, HC105, HC115, JC137, JC145, HC145, HC147, HC156, HC165, HBT128, HWS128, HDS128, JDS160, JWS160, HDS235, HWS235, HCS225 (1939-46) (gasoline)	50@50° to 110°	40@15° to 50°	30@–20° to 15°	140	90	140	90	110EP	110EP	140
STEWART—49A	(S)30	(W)20		160	90	160	90	160	90	160
58A, 59A	(S)40	(W)30		160	110	160	110	160	110	160
38A	(S)50	(W)30		160	110	160	110	160	110	160
STUDEBAKER—T2, T4, T6, T8 (1934); IT200, IT600 (1935)	30 above 45°††	20@10° to 45°	10 below 10°	140	90	140	90			
W8 (1934); IW700, IW800 (1935)	50 above 32°	40@0° to 32°	30 below 0°	140	90	140	90			
2T2, 2M2, 2TB2 (1936)	30 above 45°††	20@10° to 45°	10 below 10°	140 above 32°	90 below 32°	140 above 32°	90 below 32°			
2W6, 2M6, 2NB6, 247 (1936)	40 above 32°	30@0° to 32°	20 below 10°	140 above 32°	90 below 32°	140 above 32°	90 below 32°			
2WB (1936)	50 above 32°	40@0° to 32°	20 below 0°	140 above 32°	90 above 32°	140 above 32°	90 below 32°			
J5 (1937)	30@45° to 90°††	20@0° to 45°	10 below 0°	90	90	EP	EP			
J15, J15B, J15M, K15, K15B, K15M (1937-40)	30 above 45°††	20@0° to 45°	10 below 0°	140 above 32°	90 below 32°	140 above 32°	90 below 32°			
J20, J20M, J20MB, J25, J25M, J25MB, K20, K20M, K20MB, K25, K25M, K25MB (1937-40)	40 above 32°	30@0° to 32°	20 below 0°	140 above 32°	90 below 32°	140 above 32°	90 below 32°			
J30, J30M, K30, K30M (1937-40)	50 above 32°	40@0° to 32°	30 below 0°	140 above 32°	90 below 32°	140 above 32°	90 below 32°			
K5 (1938); L5 (1939)	30 above 32°	20@0° to 32°	10 below–10°	90	90	EP	EP			
K10 (1938-40)	30 above 45°	20@0° to 45°	10 below 0°	140 above 32°	90 below 32°	140 above 32°	90 below 32°			
Coupe-Express (1941-42)	40 above 90°	20@10° to 32°	10 below 10°	140 above 32°	90 below 32°	90EP	90EP			
M-5 (1945-46)	30@32° to 90°	20@10° to 32°	10 below 10°	140 above 32°	90 below 32°	140 above 32°	90 below 32°			
All Other Models (1941-46)	30@32° to 90°	20@10° to 32°	10 below 10°	90k	90k	140 above 32°	90 below 32°			
WALTER—All Models	(S)50	(W)30		140	90	140	90	140	90	
WARD LA FRANCE—D-1, D1B	40 above 32°	30@0° to 32°	10@–10° to 0°	140j	90j	140j	90j	140	140	...
D-1C, D-2, D-3, D-3 Spec.	40 above 32°	30@0° to 32°	10@–10° to 0°	140j	90j	140EP	90EP	140	140	...
WHITE—All Models	40 above 90°	30 above 32°	20 above 10° 10 above –10°	140	90	140	90			140
WILLYS—77 (1933-36)	30@40° to 80°	20@15° to 40°	10@–15° to 15°	190 to 210	150 to 170	190 to 210	150 to 170	190 to 210	150 to 170	FG
77, 38, 48 (1937-39)	30 or 20W above 32°	10@ above –10°	90% 10, 10% Kero below –10°	90	80	90	80	190 to 210	150 to 170	FG
440, 441, 441P, 442, 442P	30 above 90° 20@32° to 90°	20@10° to 32° 10@ –10° to 10°		90	80	90	80	250	250	FG
CJ-2A (Universal Jeep)	20 or 30 above 32°	10W below 32°		90	80	90EP	90EP			p

ABBREVIATIONS

*—Fibre Grease for pin and bushing type; 160 for needle bearing type
**—Use 90EP below 30°; 140EP above 30° on all 2-speed axles
***—Use 160EP on 5-speed transmissions
†—10% kerosene in extremely low temperatures
††—Use 40 for high speed above 90°
§—Use 50 for high speed above 80°
‡—Use 40 in 672 and 707 Diesel engines
‡—Use 90EP with dual performance axles. Do not use EP in double reduction axles

a—Double reduction and 2-speed axles 110EP
b—Double reduction and 2-speed axles 90EP (140EP at temperatures above 100°)
A—Also front axle
C—Use 90EP in two-speed axles on Models 147, 154 156
d—If equipped with steering column shift use 90
e—If equipped with steering column shift use 80
f—Under severe conditions use 140 Hyp
g—Use 80% 90, 20% 10W or straight 80 gear lube below –10°

h—Chassis lube
j—Straight mineral oil
k—If equipped with overdrive use only 90 mineral gear lube or 50 engine oil, summer and winter
p—Front axle shaft U-joint: FG
Propeller shaft U-joint: NLGI #0, winter; NLGI #1, summer.
q—Use 80 Hyp below zero
EP—Extreme pressure
FG—Fibre Grease
H—Heavy duty

Hyp—Truck-type hypoid lubricant
Kero—Kerosene
L—Light duty
M—Mild
N—Normal duty
(S)—Summer
SS—Cylinder oil sodium soap grease
(W)—Winter
X—Aviation grade engine oil with anti-foam characteristics

*—Severe Service .018
**—If optional engine model is used, see specification under engine manufacturer's listing.
■—Minimum
†—46 for AF240, AFP240, CCV100
††—Commercial 8AB, 18mm. plugs for 1941 models; J9, 14mm. for 1942 models
‡—Heavy duty plug; for light duty use H-10
(1)—Timing is for H models, Spark of G models variable

A—.019–.023
a—With Roto Valve, .010
AC—AC
AL—Auto-Lite
b—With Roto Valve, .016
Bud—Buda
C—Cold
C/A—Champion or Auto-Lite
Cat—Caterpillar
Ch—Champion
Con—Continental

Cum—Cummins
D—.018–.024
d—With Roto Valve, .018
E—.018–.020
EE—.016–.018
F—30 to 40
H—.015–.025
HH—.013–.015C
Her—Hercules
K—.020–.025
KK—.010–.012C

Lyc—Lycoming
M—5°B for CC450, 3°B for CF450
N—Varies with compression ratio
O—1800-2100
Opt—Optional
P—.018–.023
R—.028–.032
RR—1° 52½' A
S—.023–.028
T—.025–.028
TC—Top Center

ENGINE TUNE-UP

Specifications

The remedy for eliminating driver gripes about engine sluggishness, and high maintenance costs, will be found in this Table

NOW that war speeds have been lifted and the quality of gasoline improved, there is no good excuse for sluggish engines which waste fuel, increase driver complaints and maintenance costs and decrease productivity.

A smoothly purring engine is a joy to any driver and it will reflect in his work and attitude toward the company and his job.

Considering all the advantages, it is hard to understand why more fleets do not insist upon frequent tune-ups. The three principal reasons for the lack of such a procedure are manpower shortage, too much other work on hand and complications in gathering all the necessary data and instructions for the mechanics.

The first two reasons usually go hand in hand. If the greater part of the fleet is tuned-up, the amount of urgent work drops considerably and available manpower becomes

V—.012-.014
Var—Variable
Wau—Waukesha
Y—.011-.012C
YY—.014-.016
Z—.018-.022
ZZ—.025-.030

★

TRUCK MAKE AND MODEL	Standard Engine Make and Model **	Number of Cylinders, Bore and Stroke	Normal Oil Pressure Lb. at M.P.H. or R.P.M.	Intake Valve Opens B-Before A-After		Intake Tappet Clearance for Valve Timing	OPERATING TAPPET CLEARANCE (Hot unless noted)		SPARK PLUG				Breaker Point Gap	Spark Occurs °TC B-Before A-After	Spark Occurs Fly-Wheel Teeth °TC B-Before A-After	Comp. Pressure at Cranking Speed
				°TC	Flywheel Teeth TC		Intake	Exhaust	Make	Type	Size	Gap				
AUTOCAR																
RH, DF, RHT, DT, DFT, RHD, DP, 6D, DH, UD, UDF, UDT, UDP, 6RH, 6DF, 6UD, UDFT	Own 358	6-4x4¾	40-2200	TC	TC	.020	.015	.018	Ch	2 COM	⅞	.025	D	8½°B	1 1/16	98
N, NT, 6N, UN, UNT, 6UN, 4X4DF, 4X4N	Own 404	6-4¼x4¾	40-2200	TC	TC	.020	.015	.018	Ch	2 COM	⅞	.025	D	2°B	¼B	95
NF, NFT, 6NF, UNF, UNFT, 6UNF, S, US, N60C, 4X4NF	Own 453	6-4½x4¾	40-2200	TC	TC	.020	.015	.018	Ch	2 COM	⅞	.025	D	2°B	¼B	95
TF, TFT, 6TF	Wau 6RB	6-5x5¾	40-1750	10°A	3¾A	.020	.006	.010	Ch	2 COM	⅞	.025	D	9°B	3½B	80
RM, RL, RMT (1937)	Own 315	6-3¾x4¾	40-2200	TC	TC	.020	.015	.018	Ch	8 COM	18mm	.025	D	8½°B	1 1/16	98
DP, D, 4TR, 6X2RL, RLD, UD, 1UTR, UPD, 6X2UD (1937)	Own 358	6-4x4¾	40-2200	TC	TC	.020	.015	.018	Ch	O	⅞	.025	D	8½°B	1 1/16	98
DF, 2TR, 6X2DF, DH, UDF, 2UTR, 6XEUN, 4X4DF, 4X4N, 6X4DF (1937)	Own 404	6-4¼x4¾	40-2200	TC	TC	.020	.015	.018	Ch	O	⅞	.025	D	2°B	¼B	95
6X2UNF, 3UTR, 4UTR, 3TR, 4TR, 6X2NF, C, 4X4NF (1937)	Own 453	6-4½x4¾	40-2200	TC	TC	.020	.015	.018	Ch	O	⅞	.025	D	2°B	¼B	95
6T, UT, UTT, 6UT, N7EC, 4X4S (1936-37), C, T, TT, 6X3T, 6X2UT, 5TR, 5UTR, 6X4TO, 6X4UTO, 6X4UTD, 6X4TC, 6X4TD	Own 501	6-4½x5¼	40-2200	TC	TC	.020	.015	.018	Ch	8 COM	18mm	.025	D	6°B	2B	95
A, UA, C10, C10T, U10, U10T	Her JXB	6-3⅝x4¼	35-2600	2°A	.....	.010	.006	.006	Ch	O	⅞	.025	E	TC	TC	95
B, UB, C20, C20T, U20, U20T	Her JXC	6-3⅝x4¼	35-2600	2°A	.....	.010	.006	.006	Ch	O	⅞	.025	E	TC	TC	95
RB, URB	Own 315	6-3¾x4¾	40-2200	TC	TC	.018	.015	.018	Ch	8 COM	18mm	.025	D	9°B	1¼B	98
RL, RLS, 1TR, RLD, DP, 6X2RL, URL, URLS, UD, 1UTR, UDP, 6X2UD	Own 358	6-4x4¾	40-2200	TC	TC	.018	.015	.018	Ch	2 COM	⅞	.025	D	9°B	1¼B	98
DF, N, 2TR, DH, 6X2DF, 6X4DF, UDF, UN, 2UTR, 6X2UN, 4X4DF	Own 408	6-4 1/16x5¼	40-2200	TC	TC	.018	.015	.018	Ch	8 COM	18mm	.025	D	2°B	¼B	95
NF, 3TR, 4TR, S, 6X2NF, UNF, 3UTR, 4UTR, US, 6X2UNF, 4X4N	Own 447	6-4¼x5¼	40-2200	TC	TC	.018	.015	.018	Ch	8 COM	18mm	.025	D	6°B	2B	95
C30, C30T, U30, U30T (1939-40)	Own 315	6-3¾x4¾	40-2600	TC	TC	.020	.015	.018	Ch	8 COM	18mm	.025	D	6°B	11B	98
C30, C30T, U30, U30T (1941-42)	Own 331	6-3¾x5	40-2600	TC	TC	.020	.015	.018	Ch	8 COM	18mm	.025	D	6°B	11B	99
C40, C40T, C40D, U40, U40T, U40D, C50, C50D, U50, C60, U60, U60D (1939-40)	Own 358	6-4x4¾	40-2600	TC	TC	.020	.015	.018	Ch	8 COM	18mm	.025	D	6°B	11B	99
C40, C40T, C40D, U40, U40T, U40D, C50, C50T, C50D, U50 (1941-42)	Own 377	6-4x5	40-2600	TC	TC	.020	.015	.018	Ch	8 COM	18mm	.025	D	6°B	2B	95
C60T, U60T, C70, C70D, U70 (1939-42), C60, U60, U60D (1941-42)	Own 408	6-4 1/16x5¼	40-2400	TC	TC	.020	.015	.018	Ch	8 COM	18mm	.025	D	2°B	¼B	95
C70T, U70T, C80, C80T, C80D, U80, U80T, U80D (1939-42)	Own 447	6-4¼x5¼	40-2400	TC	TC	.020	.015	.018	Ch	8 COM	18mm	.025	D	6°B	2B	95
C90, C90T, C90D, U90, U90T, U90D (1939-42)	Own 501	6-4½x5¼	40-2400	TC	TC	.020	.015	.018	Ch	8 COM	18mm	.025	D	6°B	2B	95
C9044	Her HXB	6-5x6	40-2600	TC	TC	.....	.015	.018	Ch	8 COM	18mm	.025	E	TC	TC	95
C50, C50T, C50D, C5064, U50, U50T (1944-46)	Own 377	6-4x5	40-2600	11°B	4B	.020	.016	.021	C/A	.....	18mm	.025	D	6°B	2B	98
C70, C70T, C70D, U70, U70T (1945-46)	Own 447	6-4¼x5¼	40-2400	11°B	4B	.020	.016	.021	C/A	.....	18mm	.025	D	6°B	2B	95
C70, C70T (1944 only), C70S, C70TS, U70S, U70TS, C90, C90T, U90, U90T (1944-45)	Own 501	6-4½x5¼	40-2400	11°B	4B	.020	.016	.021	C/A	.....	18mm	.025	D	6°B	2B	95
C70S, C70TS, U70S, U70TS, C90, C90T, C90D, U90, U90T (1946)	Own 501	6-4½x5¼	40-2400	16°B	6B	.020	.016	.021	C/A	.....	18mm	.025	D	6°B	2B	100
DC100, DC100T, DC10064, DC10064S, DC100D (1944-46)	Cum. HB-600	6-4 7/8x6	40-1800	5°B	.....	.....	.014	.022	Diesel					Diesel		
DC100DN (1946)	Cum.NHB-600	6-5⅛x6	40-1800	5°B	.....	.....	.014	.022	Diesel					Diesel		
BROCKWAY																
78 (1936-40)	Con 24B	6-3 1/16x4⅜	20-20	2°B	½B	.015	.010	.010	Ch	8 COM	18mm	.025	.020	8°B	2½B	95
87, 90X (1936)	Con 28B	6-3⅝x4⅝	20-20	5°B	1½B	.012	.008	.010	Ch	0 COM	¼	.025	.020	5°B	1½B	95
83, 88, 92, 94 (1936-40)	Con 25B	6-3 7/16x4⅝	20-20	5°B	1½B	.012	.008	.010	Ch	8 COM	18mm	.025	.020	5°B	1½B	95
125X (1936-40)	Con 31B	6-3 7/16x4½	30-20	8°B	2¾B	.015	.012	.012	Ch	8 COM	18mm	.025	.020	8½°B	3B	90
96, 110, 130 (1936-40)	Con 29B	6-3 11/16x4½	30-20	8°B	2¾B	.015	.012	.012	Ch	8 COM	18mm	.025	.020	8½°B	3B	90
145 (1936-40)	Con 31B	6-3 7/16x4½	30-20	8°B	2¾B	.015	.012	.012	Ch	8 COM	18mm	.025	.020	8½°B	3B	90
150X4, 150X5 (1936-40)	Con 32B	6-4⅛x4½	30-20	8°B	2¾B	.015	.012	.012	Ch	8 COM	18mm	.025	.020	8½°B	3B	90
160X, 180XSBT, 165X (1936-40)	Con 32B	6-4⅛x4½	30-20	8°B	2¾B	.015	.012	.012	Ch	8 COM	18mm	.025	.020	8½°B	3B	90
170X (1936-40)	Con 33B	6-4⅛x4¾	30-20	5°B	2B	.014	.012	.015	Ch	8 COM	18mm	.025	.020	15°B	5½B	82
175X, 180X-SBT Spec., 220X (1936-40)	Con 34B	6-4⅝x4¾	30-20	5°B	2B	.014	.012	.015	Ch	8 COM	18mm	.025	.020	15°B	5½B	82
195X (1936-40)	Con 33B	6-4⅛x4¾	30-20	5°B	2B	.014	.012	.015	Ch	8 COM	18mm	.025	.020	15°B	5½B	82
240X, 260X (1936-40)	Con 35B	6-4½x5¼	30-20	5°B	2B	.014	.012	.015	Ch	8 COM	18mm	.025	.020	15°B	5½B	82
112, 128 (1938-40)	Con 38B	6-3⅝x4⅝	30-20	8°B	2¾B	.015	.012	.012	Ch	8 COM	18mm	.025	.020	8½°B	3B	90
78 (1941-42)	Con 24B	6-3 1/16x4⅜	35-2000	2°B	2B	.015	.014C	.014C	Ch	6 COM	18mm	.025	.020	TC	.....	.....
83, 88, 92, 94 (1941-42)	Con 25B	6-3 7/16x4⅝	40-2000	5°B	5B	.0175	.017C	.024C	Ch	6 COM	18mm	.025	.020	6°B	.....	.....
112-128 (1941-42)	Con 38B	6-3⅝x4⅝	40-2000	6½°B	.....	.022	.017C	.024C	Ch	6 COM	18mm	.025	.020	6°B	.....	.....
146, 147, 152 (1941-42)	Con 40B	6-4x4⅝	40-2000	6½°B	.....	.022	.017C	.024C	Ch	6 COM	18mm	.025	.020	6°B	.....	.....
153, 154, 162 (1941-42)	Con 41B	6-4⅛x4⅝	55-2500	6½°B	.....	.022	.017C	.024C	Ch	6 COM	18mm	.025	.020	6°B	.....	.....
156, 166 (1941-42)	Con 42B	6-4 1/16x4⅝	55-2500	6½°B	.....	.022	.017C	.024C	Ch	6 COM	18mm	.025	.020	6°B	.....	.....
170X, 195X (1941-42)	Con 33B	6-4⅛x4¾	30-2300	5°B	.....	.014	.018C	.018C	Ch	6 COM	18mm	.025	.020	15°B	.....	.....
175X, 220X (1941-42)	Con 34B	6-4⅝x4¾	30-2300	5°B	.....	.014	.018C	.018C	Ch	6 COM	18mm	.025	.020	15°B	.....	.....
240X, 260X (1941-42)	Con 35B	6-4½x5¼	30-2300	5°B	.....	.014	.018C	.018C	Ch	6 COM	18mm	.025	.020	15°B	.....	.....
88W (1944-45)	Con 25B	6-3 7/16x4⅝	40-2000	5°B	1½B	.0175	.017C	.022C	Ch	6 COM	18mm	.025	.020	6B	.....	.....
88WH (1945-46)	Con 38B	6-3⅝x4⅝	40-2000	6½°B	2¼B	.022	.017C	.022C	Ch	6 COM	18mm	.025	.020	6B	.....	.....
146W (1944-46)	Con 40B	6-4x4⅝	40-2000	6½°B	2¼B	.022	.017C	.022C	Ch	6 COM	18mm	.025	.020	6B	.....	.....
152W, 154W (1944-46)	Con 42BX	6-4 1/16x4 7/16	55-2500	16°B	6B	.022	.017C	.022C	Ch	6 COM	18mm	.025	.020	6B	.....	.....
266WX (1944-46)	Con 48B	6-4 5/16x5⅜	55-2500	17°B	6½B	.024	.022C	.022C	Ch	5 COM	18mm	.025	.020	5B	.....	.....
154 (1946)	Con 46B	6-4½x5⅜	55-2500	17°B	6½B	.024	.022C	.022C	.....	.....	.....	.....	.....	.....	.....	.....
CHEVROLET																
½, 1½ Ton (1934)	Own	6-3 1/16x4	.....	4°B	1½B	.006	.006	.013	AC	K10	14mm	.032	.018	10°B	3½B	83
½, 1½ Ton (1935)	Own	6-3 1/16x4	.....	8°B	3B	.006	.006	.013	AC	K11	14mm	.032	.018	5°B	1¾B	86
½, 1½ Ton (1936)	Own	6-3 1/16x4	.....	9°B	3¼B	.006	.006	.013	AC	K11	14mm	.032	.018	5°B	1¾B	112
½, 1½ Ton (1937)	Own	6-3 1/16x3¾	13½-2621	9°B	3½B	.006	.006	.013	AC	K11	14mm	.040	.018	5°B	2B	90*
½, ¾, 1, 1½ Ton (1938)	Own	6-3 1/16x3¾	13½-2621	9°B	3½B	.006	.006	.013	AC	46	14mm	.040	.018	5°B	2B	90*

TURN TO NEXT PAGE, PLEASE

more productive. Thus voiding, at one stroke, two excuses.

The last reason may be valid enough if maintenance manuals, in use for a number of years, are worn, torn or lost. Also, if higher rated substitutions have been made, then tune-up data found in the old manuals cannot be used. This is where the data contained in this Table comes into use. All the needed facts are summarized and translated into data usable by the mechanics.

Caution should be exercised in ascertaining that the engine being tuned is the same as the original equipment and not a replacement of a different model and rating. Numerous such exchanges during the war have caused confusion in tune-up time. The column in the Table entitled "Engine Make and Model" will be of great assistance when any doubt exists. This caution also applies to parts replacements that are not standard.

ENGINE TUNE-UP

Specifications

(Continued from Page 55)

*—Severe Service .018
**—If optional engine model is used, see specification under engine manufacturer's listing.
■—Minimum
†—46 for AF240, AFP240, CCV100
††—Commercial 8AB, 18mm. plugs for 1941 models; J9, 14mm. for 1942 models
‡—Heavy duty plug; for light duty use H-10
(1)—Timing is for H models, Spark of G models variable

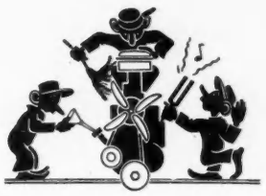
TRUCK MAKE AND MODEL	Standard Engine Make and Model **	Number of Cylinders, Bore and Stroke	Normal Oil Pressure Lb. at M.P.H. or R.P.M.	Intake Valve Opens B-Before A-After		Intake Tappet Clearance for Valve Timing	OPERATING TAPPET CLEARANCE (Hot unless noted)		SPARK PLUG				Breaker Point Gap	Spark Occurs °TC B-Before A-After	Spark Occurs Fly-Wheel Teeth °TC B-Before A-After	Comp. Pressure at Cranking Speed
				°TC	Flywheel Teeth TC		Intake	Exhaust	Make	Type	Size	Gap				
CHEVROLET—Continued																
½, ¾, 1, 1½ Ton (1939)	Own	6-3½x3¾	13½-2621	9°B	3½B	.006	.006	.013	AC	44	14mm	.040	.018	5°B	2B	90■
½, ¾, 1, 1½ Ton (1940)	Own	6-3½x3¾	14-2000	3°B	1½B	.006	.006	.013	AC	44	14mm	.040	.018	5°B	2B	90■
½, ¾, 1, 1½ Ton (1941-46) (216.5 cu. in.)	Own	6-3½x3¾	14-2000	3°B	1½B	.006	.006	.013	AC	104	10mm	.040	.018	5°B	2B	110■
1½ Ton (1941-46), 2 Ton (1946) (235.5 cu. in.)	Own	6-3 15/16x3 11/16	14-2000	3°B	1½B	.006	.006	.013	AC	104	10mm	.040	.018	5°B	2B	110■
CORBITT																
See specifications under applicable engines																
DIAMOND T																
211, 227, 243, 212A, 212B, 228, 401, 402, 404, 405 (1935-1938)	Her JXA	6-3 15/16x4¼	25-30	5°A	1½A	.006	.008	.010	AC	76	⅞	.027	.020	TC	TC	..½
220, 311, 221, 244, 313, 406, 507, 509, 611 (1935-38)	Her JXB	6-3 15/16x4¼	25-30	5°A	1½A	.006	.008	.010	AC	76	⅞	.027	.020	TC	TC	103
312, 351C, 320, 353, 607, 612, 613 (1935-38)	Her JXC	6-3¾x4¼	25-30	5°A	1½A	.006	.008	.010	AC	76	⅞	.027	.020	TC	TC	102
352, 3610, 614 (1935-38), 614, 614C (1939)	Her JXD	6-4x4¼	25-30	5°A	1½A	.006	.008	.010	AC	76	⅞	.027	.020	TC	TC	109
412B (1935)	Her WXLC	6-4x4¾	25-30	2°A	½A	.010	.006	.010	AC	76	⅞	.027	.020	TC	TC	106
412DR, 512B, 512DR (1935-38), 803C, 804C (1939)	Her WXLC3	6-4¼x4¾	25-30	2°A	½A	.010	.008	.010	AC	76	⅞	.027	.020	TC	TC	100
80, 301 (1936-38), 201, 201C (1939)	Her QXB3	6-3¼x4⅛	25-30	5°A	1½A	.006	.006	.008	AC	75	⅞	.027	.020	TC	TC	....
304, 401 (1937-38), 305, 305C, 306, 306C (1939)	Her QXC3	6-3⅝x4⅛	25-30	5°A	1½A	.006	.006	.008	AC	75	⅞	.027	.020	TC	TC	....
404, 404C (1939)	Her JXE3	6-3½x4¼	25-30	5°A	1½A	.....	.006	.008	AC	73	⅞	.027	.020	TC	TC	....
406, 509, 509C (1939)	Her JXB	6-3 15/16x4¼	25-30	5°A	1½A	.006	.008	.010	AC	73	⅞	.027	.020	TC	TC	....
612, 612C (1939)	Her JXC	6-3¾x4¼	25-30	5°A	1½A	.006	.008	.010	AC	73	⅞	.027	.020	TC	TC	....
201 (1940 & Early 1941)	Her QXB3	6-3¼x4⅛	25-35	5°A	1½A	.006	.006	.008	AC	44	14mm	.027	.020	TC	TC	....
201, 306, 306SC (Late 1941 & 1942)	Her QXD3	6-3 7/16x4⅛	25-35	5°A	.....	.006	.006	.010	AC	44	14mm	.027	.020	TC	TC	....
305, 306, 306SC (1940 & Early 1941)	Her QXC3	6-3⅝x4⅛	25-35	5°A	1½A	.006	.006	.008	AC	44	14mm	.027	.020	TC	TC	....
404, 404SC (1940); 404 (1945)	Her JXE3	6-3½x4¼	25-35	2°A	¾A	.010	.006	.010	AC	44	14mm	.027	.020	TC	TC	....
406, 509, 509C (1940-41); 509, 509C, 509SC (1945)	Her JXB	6-3 15/16x4¼	25-35	2°A	¾A	.010	.008	.010	AC	44	14mm	.027	.020	TC	TC	....
612, 612C (1940-41)	Her JXC	6-3¾x4¼	25-35	2°A	¾A	.010	.008	.010	AC	44	14mm	.027	.020	TC	TC	....
614, 614C (1940-45)	Her JXD	6-4x4¼	25-35	5°A	¾A	.010	.006	.010	AC	44	14mm	.027	.020	TC	TC	....
404C (1940-41)	Her JXE3	6-3½x4¼	25-35	2°A	¾A	.010	.008	.010	AC	44	14mm	.027	.020	TC	TC	....
803C, 804C, 805, 806 (1940-41); 702, 806 (1945)	Her WXLC3	6-4¼x4¾	25-35	5°A	1½A	.010	.006	.010	AC	44	14mm	.027	.020	TC	TC	....
900 (1940-45)	Her RXLC3	6-4 5/16x5¼	25-35	2°A	¾A	.010	.006	.010	AC	44	14mm	.027	.020	TC	TC	....
DODGE																
KC, KCL, KH, Series LC	Own 201 cu.in.	6-3½x4⅜	30-40-30	6°A	2½A	.011	.006	.008	AC	K9	14mm	.025	.020	3°A	1¼A	....
K32, K33, K34	Own 217 cu.in.	6-3¼x4⅜	30-40-30	6°A	2½A	.011	.006	.008	AC	K9	14mm	.025	.020	2°A	¾A	....
K35, K36, K37, K38, K45, K46, K47, K48	Own 241 cu.in.	6-3⅝x4½	30-40-30	TC	TC	.011	.006	.008	AC	K9	14mm	.025	.020	TC	TC	....
K50, K51, K52, K70, K71, K72	Own 309 cu.in.	6-3⅝x5	30-40-30	6°A	2½A	.010	.008	.010	AC	K9	14mm	.025	.020	4°B	1⅛B	....
LE Series	Own 201 cu.in.	6-3½x4⅜	30-40-30	6°A	2½A	.011	.006	.010	AC	K9	14mm	.025	.020	3°A	1¼A	....
LF Series	Own 217 cu.in.	6-3¼x4⅜	30-40-30	6°A	2½A	.011	.006	.010	AC	K9	14mm	.025	.020	2°A	¾A	....
LG, LH Series	Own 241 cu.in.	6-3⅝x4½	30-40-30	TC	TC	.010	.006	.010	AC	K9	14mm	.025	.020	TC	TC	....
K50V, K51V, K52V, K60V, K61V, K62V	Own 309 cu.in.	6-3⅝x5	30-40-30	6°A	2½A	.010	.008	.010	AC	K9	14mm	.025	.020	3°B	1⅛B	....
MC, RC (1937-38)	Own 218 cu.in.	6-3⅜x4 1/16	30-40-30	TC	TC	.014	.008	.012	Ch	J8	14mm	.025	.020	TC	TC	....
RD, MD Series (1937-38)	Own 218 cu.in.	6-3⅜x4 1/16	30-40-30	TC	TC	.014	.008	.012	Ch	J8	14mm	.025	.020	TC	TC	....
RE, ME Series (1937-38)	Own 218 cu.in.	6-3⅜x4 1/16	30-40-30	TC	TC	.014	.008	.012	Ch	J8	14mm	.025	.020	4°B	1⅛B	....
RF, MF Series (1937-38)	Own 228 cu.in.	6-3 7/16x4¼	30-40-30	TC	TC	.014	.008	.012	Ch	J8	14mm	.025	.020	4°B	1⅛B	....
RG, RH, MG, MH Series (1937-38)	Own 241 cu.in.	6-3⅝x4½	30-40-30	TC	TC	.014	.008	.012	Ch	J8	14mm	.025	.020	6°B	2⅛B	....
RL, RK, RO, RP, ML, MK Series (1937-38)	Own 333 cu.in.	6-3⅝x5	30-40-30	6°A	2½A	.011	.008	.012	Ch	J8	14mm	.025	.020	6°B	2⅛B	....
TC (1939)	Own 201 cu.in.	6-3½x4⅜	30-40-30	6°A	2½A	.014	.006	.010	AL	A7	14mm	.025	.020	TC	TC	116
TD (1939)	Own 218 cu.in.	6-3¼x4⅜	30-40-30	6°A	2½A	.014	.006	.010	Ch	J8	14mm	.025	.020	TC	TC	108
TE (1939)	Own 218 cu.in.	6-3⅜x4 1/16	30-40-30	8°B	3B	.014	.008	.012	Ch	J8	14mm	.025	.020	2°B	¾B	115
TF (1939)	Own 228 cu.in.	6-3⅜x4¼	30-40-30	8°B	2B	.014	.008	.012	Ch	J8	14mm	.025	.020	4°B	1⅛B	115
TG, TH (1939)	Own 241 cu.in.	6-3⅝x4½	30-40-30	8°B	3B	.014	.008	.012	Ch	J8	14mm	.025	.020	6°B	2⅛B	115
TL, TK (1939)	Own 331 cu.in.	6-3¾x5	30-40-30	6°A	2A	.014	.008	.012	AL	A7	14mm	.025	.020	2°B	¾B	88
TLD, T KD (1939)	Own 331 cu.in.	6-3¾x5	30-40-30	31°B	.....	.017	.013	.013	.....	.....	Die	sel	.....	.....	.....	.....
VC (1940)	Own 201 cu.in.	6-3½x4⅜	30-40-30	6°A	2½A	.014	.006	.010	AL	A7	14mm	.025	.020	TC	TC	115
VD (1940)	Own 218 cu.in.	6-3¼x4⅜	30-40-30	6°A	2½A	.014	.006	.010	AL	A7	14mm	.025	.020	TC	TC	113
VF, VM (1940)	Own 228 cu.in.	6-3⅜x4¼	30-40-30	12°B	5B	.014	.008	.012	AL	A7	14mm	.025	.020	TC	TC	120
VG, VH (1940)	Own 241 cu.in.	6-3⅝x4½	30-40-30	12°B	5B	.014	.008	.012	AL	A7	14mm	.025	.020	TC	TC	120
VL, VK, WL, WK (1940-41)	Own 331 cu.in.	6-3¾x5	30-40-30	6°A	2½A	.014	.008	.012	Ch	J8	14mm	.025	.020	2°A	¾A	98
VLD, VKD, WLD, WKD (1940-41)	Own 331 cu.in.	6-3¾x5	30-40-30	31°B	15B	.017	.013	.013	.....	.....	Die	sel	.....	.....	.....	.....
WC (1941)	Own 201 cu.in.	6-3½x4⅜	30-40-30	9°B	.....	.014	.008	.010	AL	A7A	14mm	.025	.020	TC	TC	115
WD (1941)	Own 218 cu.in.	6-3¼x4⅜	30-40-30	9°B	.....	.014	.008	.010	AL	A7A	14mm	.025	.020	TC	TC	113
WF, WFM (1941)	Own 228 cu.in.	6-3⅜x4¼	30-40-30	12°B	5B	.014	.008	.012	AL	A7A	14mm	.025	.020	TC	TC	120
WG, WH, WCM, WHM (1941)	Own 241 cu.in.	6-3⅝x4½	30-40-30	12°B	5B	.014	.008	.012	AL	A7A	14mm	.025	.020	TC	TC	120
WC, WD15 (1942); WC (1945-46)	Own 218 cu.in.	6-3¼x4⅜	40-800	12°B	5B	.014	.010	.012	AL	A7	14mm	.025	.020	3°B	.....	130
WD20, WD21 (1942-46); WDX (1946)	Own 230 cu.in.	6-3¼x4⅝	40-800	12°B	5B	.014	.010	.012	AL	A7	14mm	.025	.020	2°A	.....	130
WF, WFM (1942-46)	Own 237 cu.in.	6-3 7/16x4¼	40-800	12°B	5B	.014	.010	.012	AL	A7	14mm	.025	.020	TC	.....	130
WG, WCM, WHM (1942); WH (1942-46)	Own 251 cu.in.	6-3 7/16x4½	40-800	12°B	5B	.014	.010	.012	AL	A7	14mm	.025	.020	2°A	.....	130
WL, WK (1942)	Own 331 cu.in.	6-3¾x5	30-40-30	6°A	2½A	.014	.010	.012	Ch	J8	14mm	.025	.020	2°A	.....	98
WLD, WKD (1942)	Own 331 cu.in.	6-3¾x5	30-40-30	31°B	.....	.017	.0135	.0135	.....	.....	Die	sel	.....	.....	.....	.....
FEDERAL																
15X, 15, 15K, 75, 75H, 75K	Her JXA	6-3 15/16x4¼	25-1500	5°A	1½A	.006	.008	.010	AC	.....	⅞	.025	.020	TC	TC	....
18X, 18K, 20, 20K, 21, 22, 80, 80H, 80K	Her JXB	6-3 15/16x4¼	25-1500	5°A	1½A	.006	.008	.010	AC	.....	⅞	.025	.020	TC	TC	....
25, 25K, 85, 85H, 85K	Her JXC	6-3¾x4¼	25-1500	5°A	1½A	.006	.008	.010	AC	.....	⅞	.025	.020	TC	TC	....
30	Wau 6MS	6-3¼x4⅜	35-1500	8°A	3A	.004	.010	.012	AC	86	18mm	.025	.020	TC	TC	80
40, 40F	Wau 6MK	6-4⅛x4⅜	35-1500	8°A	3A	.004	.010	.012	AC	86	18mm	.025	.020	TC	TC	80
50, 50F	Wau 6MZ	6-4¼x4⅜	35-1500	8°A	3A	.004	.010	.012	AC	.....	.....	.025	.020	TC	TC	80
63, 66, C7, C8, C7W, C8W, C8H	Wau 6SRK	6-4 5/16x5⅛	35-1500	10°A	3½A	.004	.010	.012	AC	⅞	⅞	.025	.020	TC	TC	80
DM (1936)	Con W10	4-3 7/16x4¼	.....	.....	.....	.....	.....	.....	AC	.....	.....	.025	.020	TC	TC	....
10	Her OOB	4-3¾x4½	16-1100	5°A	.....	.008	.008	.012	AC	⅞	⅞	.025	.020	TC	TC	....
28	Her JXC	6-3¾x4¼	26-2600	5°A	.....	.....	.008	.010	AC	⅞	⅞	.025	.020	TC	TC	....

A—.019-.023
a—With Roto Valve, .010
AC—AC
AL—Auto-Lite
b—With Roto Valve, .016
Bud—Buda
C—Cold
C/A—Champion or Auto-Lite
Cat—Caterpillar
Ch—Champion

Con—Continental
Cum—Cummins
D—.018-.024
d—With Roto Valve, .013
E—.018-.020
EE—.016-.018
F—30 to 40
H—.015-.025
HH—.013-.015C
Her—Hercules

K—.020-.025
KK—.010-.012C
Lyc—Lycoming
M—5°B for CC450, 3°B for CF450
N—Varies with compression ratio
O—1800-2100
Opt—Optional
P—.018-.023
R—.028-.032
RR—1° 52½' A

S—.023-.028
T—.025-.028
TC—Top Center
V—.012-.014
Var—Variable
Wau—Waukesha
Y—.011-.012C
YY—.014-.016
Z—.018-.022
ZZ—.025-.030



TRUCK MAKE AND MODEL	Standard Engine Make and Model **	Number of Cylinders, Bore and Stroke	Normal Oil Pressure Lb. at M.P.H. or R.P.M.	Intake Valve Opens B-Before A-After		Intake Tappet Clearance for Valve Timing	OPERATING TAPPET CLEARANCE (Hot unless noted)		SPARK PLUG				Breaker Point Gap	Spark Occurs °TC B-Before A-After	Spark Occurs Fly-Wheel Teeth °TC B-Before A-After	Comp. Pressure at Cranking Speed
				°TC	Flywheel Teeth TC		Intake	Exhaust	Make	Type	Size	Gap				
FEDERAL—Continued																
29, 29K, 87H, 89, 89K	Her JXD	6-4x4¼	26-2600	5°A	.....	.....	.008	.010	AC	⅞	⅞	.025	.020	TC	TC	....
40DR	Wau 6MK	6-4½x4⅜	35-1500	8°A	3A	.....	.008	.016	AC	.....	⅞	.025	.020	TC	TC	....
T10B, T10W	Con 18R	6-4x4½	35-1500	.....	.....	.....	.....	.....	AC	.....	⅞	.025	.020	TC	TC	....
X8RDR-X8R, 7, 7M	Wau 6SRK	6-4⅝x5½	35-1500	10°A	3A	.004	.008	.016	AC	⅞	⅞	.025	.020	TC	TC	80
9	Con 4140	4-3⅞x4⅜	25-1500	TC	TC	.014	.010	.012	AC	86	18mm	.025	.020	TC	TC	....
11, 11K, 11H	Her QXB3	6-3¼x4½	25-1500	.....	.....	.....	.006	.008	AC	.....	¾	.025	.020	TC	TC	....
12K, 14K	Her QXC3	6-3⅜x4½	25-1500	.....	.....	.008	.006	.008	AC	.....	⅞	.025	.020	TC	TC	....
62, 65	Con 22R	6-4½x5¼	25-1500	.....	.....	.014	.012	.012	AC	86	18mm	.025	.020	TC	TC	78
8, 11, M8, M11 (1940-42)	Her QXB	6-3¼x4½	40-2500	5°B	.....	.006	.006	.008	AC	44	14mm	.025	.020	10°B	3B	....
12, 14, M12, M14 (1940)	Her QXC	6-3⅜x4½	40-2500	5°B	.....	.006	.006	.008	AC	44	14mm	.025	.020	10°B	3B	....
15, 75 (1940)	Her JXA	6-3⅜x4¼	40-2500	5°A	.....	.008	.006	.006	AC	44	14mm	.025	.020	10°B	3B	98
18, 20, 80 (1940-42)	Her JXB	6-3⅝x4¼	40-2500	5°A	.....	.008	.006	.006	AC	44	14mm	.025	.020	10°B	3B	98
25, 85 (1940-42)	Her JXC	6-3¾x4¼	40-2500	5°A	.....	.008	.006	.006	AC	44	14mm	.025	.020	10°B	3B	98
29, 29H, 89, 89H (1940-42)	Her JXD	6-4x4¼	40-2500	5°A	.....	.008	.006	.006	AC	44	14mm	.025	.020	10°B	3B	98
40 (1940)	Wau 6MKR	6-4½x4⅜	35-1500	8°A	3A	.004	.010	.012	AC	84	18mm	.025	.020	3°B	1B	....
50, 50H (1940)	Wau 6MZR	6-4¼x4⅜	35-1500	8°A	3A	.004	.010	.012	AC	84	18mm	.025	.020	3°B	1B	....
63, 66 (1940-42)	Wau 6SRK	6-4⅝x5½	35-1500	10°A	3A	.004	.010	.012	AC	73	⅞	.025	.020	10°B	3B	....
62, 65 (1940-42)	Con 22R	6-4½x5¼	30-1000	.....	.....	.014	.012	.012	AC	83	⅞	.025	.020	15°B	.....	....
16, 76 (1941-42)	Her JXF	6-3½x4¼	40-2500	5°A	.....	.008	.006	.006	AC	44	14mm	.025	.020	10°B	3B	....
17, 77 (1941-42)	Her JXG	6-3½x4¼	40-2500	5°A	.....	.008	.006	.006	AC	44	14mm	.025	.020	10°B	3B	....
35, 90 (1941-42)	Her WXC3	6-4¼x4½	40-2500	2°A	.....	.010	.008	.010	AC	44	14mm	.025	.020	TC	TC	....
45, 55, 92, 94 (1941-42)	Her WXLC3	6-4¼x4⅜	40-2500	2°A	.....	.010	.008	.010	AC	44	14mm	.025	.020	TC	TC	....
18M (1944-45)	Her JXB	6-3⅝x4¼	40-2500	5°B	.....	.008	.008C	.010C	Ch	J10COM	14mm	.025	.020	10°B	3B	98
29M (1944-45)	Her JXD	6-4x4¼	40-2500	5°B	.....	.008	.008C	.010C	Ch	J10COM	14mm	.025	.020	10°B	3B	98
45M, 55M (1944-45)	Con B6427	6-4⅛x4⅞	55-2600	6½°B	.....	.....	.017	.017	Ch	8 COM	18mm	.025	.020	7°B	.....	98
60MA (1944-45)	Con 22R	6-4½x5¼	30-1000	5½°B	.....	.014	.012	.012	Ch	6 COM	18mm	.025	.020	15°B	.....	....
FORD																
51, V8 (1935-36)	Own	8-3⅛x3¾	30-2000	9½°B	3B	.015C	KK	KK	Ch	7	18mm	.025	YY	4°B	.....	90
75, V8 (1937)	Own	8-2.6x3.2	30-3200	9½°B	3B	.015C	KK	KK	Ch	H9♯	14mm	.027	YY	4°B	.....	110
79, V8 (1937)	Own	8-3⅛x3¾	30-2000	TC	TC	.015C	KK	KK	Ch	H9♯	18mm	.027	YY	4°B	.....	100
81T, 817T, 81Y, 81C (1938)	Own	8-3⅛x3¾	30-2000	TC	TC	.015C	KK	KK	Ch	H9♯	14mm	.027	YY	4°B	.....	100
82Y, 82C (1938)	Own	8-2.6x3.2	30-2000	9½°B	3B	.015C	KK	KK	Ch	H9♯	14mm	.027	YY	4°B	.....	100
91T, 917T, 911W, 91W, 917W, 91Y, 91C (1939)	Own	8-3⅛x3¾	30-2000	TC	TC	.015C	KK	KK	Ch	H9♯	14mm	.027	YY	4°B	.....	105
99T, 997T, 991W, 99W, 997W (1939)	Own	8-3⅛x3¾	30-2000	TC	TC	.015C	KK	KK	Ch	H9♯	14mm	.027	YY	4°B	.....	100
92Y, 922C, 02D, 02Y, 022C (1939-40)	Own	8-2.6x3.2	30-2000	9½°B	3B	.015C	KK	KK	Ch	H9♯	14mm	.027	YY	4°B	.....	100
018T, 01T, 01W, 011W, 01D, 01Y, 01C (1940)	Own	8-3⅛x3¾	30-2000	TC	TC	.015C	KK	KK	Ch	H9♯	14mm	.027	YY	4°B	.....	105
098T, 09T, 09W, 091W (1940)	Own	8-3⅛x3¾	30-2000	TC	TC	.015C	YY	YY	Ch	H9♯	14mm	.027	YY	4°B	.....	100
118T, 11T, 11W, 111W, 11D, 11Y, 11C, 11U (1941)	Own	8-3⅛x3¾	30-2000	TC	TC	.015C	YY	YY	Ch	H9♯	14mm	.027	YY	4°B	.....	100
119T, 19T, 19W, 191W, 19U, 198T (1941)	Own	8-3⅛x3¾	30-2000	TC	TC	.015C	YY	YY	Ch	H9♯	14mm	.027	YY	4°B	.....	100
1ND, 1NY, 1NC, 2ND, 2NY, 2NC (1941-42)	Own	4-3⅛x3¾	30-2000	6°B	2B	.015C	YY	YY	Ch	H9♯	14mm	.027	YY	1°B	.....	105
1GC, 2GC, 1GD, 2GD, 1GT, 2GT, 1GU, 2GU, 1GY, 2GY, 1G8T, 2G8T (1941-42)	Own	6-3.3x4.4	30-2000	3°B	1B	.021C	HH	HH	Ch	H9♯	14mm	.027	YY	2°B	.....	117
21C, 21D, 21T, 21U, 21W, 21Y, 211W, 218T, 218W (1942)	Own	8-3⅛x3¾	30-2000	TC	TC	.015	Y	.015C	Ch	H9♯	14mm	.027	YY	4°B	.....	....
29C, 29D, 29T, 29U, 29W, 29Y, 291W, 298T, 298W (1942)	Own	8-3⅛x3¾	30-2000	TC	TC	.015	Y	.015C	Ch	H9♯	14mm	.027	YY	4°B	.....	....
498T, 494T (1944); 598T, 594T (1945)	Own	8-3⅛x3¾	45-2000	TC	TC	.015	Y	.015C	Ch	H9♯	14mm	.027	YY	4°B	.....	120
6GC, 6GD, 6GY, 6GT, 6G8T, 6GU (1946)	Own	6-3.3x4.4	30-2000	3°B	1B	.021C	HH	HH	Ch	H9♯	14mm	.027	YY	2°B	.....	117
69C, 69D, 69Y, 69T, 698T, 694T, 69U, 691W, 69W, 698W, 69B (1946)	Own	8-3⅛x3¾	45-2000	TC	TC	.015	Y	.015C	Ch	H9♯	14mm	.027	YY	2°B	.....	120
FWD																
M7, M6X6, T45, T60, T65 (1939-41)	Wau RBR	6-5x5¾	35-1000	10°A	4A	.008	.008C	.012C	Ch	.....	.....	.025	.015	.....	.....	114
HS, T26 (1939-43)	Wau 6BK	6-3¾x4¼	40-2800	5°A	.....	.010	.012C	.016C	Ch	7 COM	18mm	.025	.015	23°B	.....	109
HA, T30 (1942-46)	Wau 6BZ	6-4x4¼	40-2500	5°A	.....	.010	.012C	.016C	Ch	7 COM	18mm	.025	.015	23°B	.....	109
HM, HH6, HG, HR, T32 (1939-45)	Wau 6MKR	6-4⅛x4⅜	40-2500	8°A	.....	.004	.010C	.018C	Ch	7 COM	18mm	.025	.015	24°B	.....	117
CU, CUA, CU6X6 (1939-43); HG, HR (1946)	Wau 6MZR	6-4¼x4⅜	40-2500	8°A	.....	.004	.010C	.018C	Ch	7 COM	18mm	.025	.015	21°B	.....	115
SU, SUA (1939-43)	Wau 6SRLR	6-4⅝x5½	40-2250	8°A	.....	.004	.010C	.020C	Ch	1 COM	⅞	.025	.015	22°B	.....	92
YU, YUA, MJ5, MJ6, MJ6X6, T40 (1939-46); SU (1946)	Wau 6SRKR	6-4⅝x5½	40-2250	8°A	.....	.004	.010C	.020C	Ch	1 COM	⅞	.025	.015	18°B	.....	119
M6 (1942-43)	Wau 6-140GK	6-4½x5½	40-2250	5°A	.....	.006	.014C	.020C	Ch	COM	⅞	.025	.015	.....	.....	140
M7 (1942-46); M6X6 (1942-43)	Wau 6-145GK	6-5¼x6	40-2000	5°A	.....	.006	.014C	.025C	Ch	COM	⅞	.025	.015	.....	.....	120
M10 (1939-45); M6X6 (1944-46)	Her HXE	6-5¾x6	40-2000	5°B	.....	.010	.008C	.014C	Ch	O	⅞	.025	.015	3°B	.....	....
M7D, M10D, M6X6D (1944-46)	Cum HB600	6-4⅞x6	55-	5°B	.....	.014	.008C	.010C	Die sel	.....	.....	.....	.....	.....	.....	....
GMC (GENERAL MOTORS TRUCK)	Own 228	6-3⅞x3 11/16	40-25	4B	.....	.....	.012	.016	AC	44 COM	14mm	.030	.018	.022	3B	100
CC-100, CC-150, CC-250, CC-260	Own 236	6-3⅝x3 11/16	40-25	4B	.....	.....	.012	.016	AC	44 COM	14mm	.030	.018	.022	3B	100
CC-300, CC-350	Own 248	6-3¾x3 11/16	40-25	4B	.....	.....	.012	.016	AC	44 COM	14mm	.030	.018	.022	3B	100
CC-400	Own 270	6-3¾x4	40-25	4B	.....	.....	.012	.016	AC	44 COM	14mm	.030	.018	.022	Ball	100
CC-450																
CF-300, CF-350	Own 236	6-3⅝x3 11/16	40-25	4B	.....	.....	.012	.016	AC	44 COM	14mm	.030	.018	.022	3B	100
CF-400, CF-450	Own 248	6-3¾x3 11/16	40-25	4B	.....	.....	.012	.016	AC	44 COM	14mm	.030	.018	.022	3B	100
AC-100, AC-150, AC-250, AC-300, AC-350	Own 228	6-3⅞x3 11/16	40-25	4B	.....	.....	.012	.016	AC	44 COM	14mm	.030	.018	.022	3B	100
AC-400, AC-450	Own 248	6-3¾x3 11/16	40-25	4B	.....	.....	.012	.016	AC	44 COM	14mm	.030	.018	.022	3B	100
AF-240, AF-300, AF-310, AF-350, AF-360	Own 228	6-3⅞x3 11/16	40-25	4B	.....	.....	.012	.016	AC	44 COM	14mm	.030	.018	.022	3B	100
AF-400, AF-410, AF-450, AF-460	Own 248	6-3¾x3 11/16	40-25	4B	.....	.....	.012	.016	AC	44 COM	14mm	.030	.018	.022	3B	100
AC-500, AC-550	Own 278	6-3⅝x4½	40-25	4B	.....	.....	.012	.016	AC	44 COM	14mm	.030	.018	.022	TC	100
AC-520, AC-600, AC-650	Own 308	6-3¾x4½	40-25	4B	.....	.....	.012	.016	AC	44 COM	14mm	.030	.018	.022	TC	100
AC-620, AC-700, AC-770	Own 361	6-4⅛x4½	40-25	8B	.....	.....	.012	.016	AC	44 COM	14mm	.030	.018	.022	TC	100
AC-720, AC-800, AC-870	Own 426	6-4¼x5	40-25	8B	.....	.....	.012	.016	AC	44 COM	14mm	.030	.018	.022	TC	100
AC-750, AC-850, AC-890	Own 477	6-4½x5	40-25	8B	.....	.....	.012	.016	AC	44 COM	14mm	.030	.018	.022	TC	100
AF-500, AF-550	Own 278	6-3⅝x4½	40-25	4B	.....	.....	.012	.016	AC	44 COM	14mm	.030	.018	.022	TC	100
AF-520, AF-600, AF-650	Own 308	6-3¾x4½	40-25	4B	.....	.....	.012	.016	AC	44 COM	14mm	.030	.018	.022	TC	100
AF-620, AF-700	Own 361	6-4⅛x4½	40-25	8B	.....	.....	.012	.016	AC	44 COM	14mm	.030	.018	.022	TC	100

TURN TO NEXT PAGE, PLEASE

ENGINE TUNE-UP

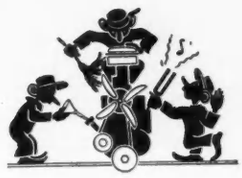
Specifications

(Continued from Page 57)

*—Severe Service .018
**—If optional engine model is used, see specification under engine manufacturer's listing.
■—Minimum
†—46 for AF240, AFP240, CCV100
††—Commercial 8AB, 18mm. plugs for 1941 models; J9, 14mm. for 1942 models
#—Heavy duty plug; for light duty use H-10
(1)—Timing is for H models, Spark of G models variable

TRUCK MAKE AND MODEL	Standard Engine Make and Model **	Number of Cylinders, Bore and Stroke	Normal Oil Pressure Lb. at M.P.H. or R.P.M.	Intake Valve Opens B-Before A-After		Intake Tappet Clearance for Valve Timing	OPERATING TAPPET CLEARANCE (Hot unless noted)		SPARK PLUG				Breaker Point Gap	Spark Occurs °TC B-Before A-After	Spark Occurs Fly-Wheel Teeth °TC B-Before A-After	Comp. Pressure at Cranking Speed
				°TC	Flywheel Teeth TC		Intake	Exhaust	Make	Type	Size	Gap				
GMC (General Motors Truck)—Continued																
AF-720, AF-800	Own 426	6-4¼x5	40-25	8B	.....	.....	.012	.016	AC	44 COM	14mm	.030	.018	.022	TC	100
AF-750, AF-850	Own 477	6-4½x5	40-25	8B	.....	.....	.012	.016	AC	44 COM	14mm	.030	.018	.022	TC	100
ACR-520	Own 308	6-3⅞x4½	40-25	4B	.....	.....	.012	.016	AC	44 COM	14mm	.030	.018	.022	TC	100
ACR-620	Own 361	6-4⅛x4½	40-25	8B	.....	.....	.012	.016	AC	44 COM	14mm	.030	.018	.022	TC	100
ACR-720	Own 426	6-4¼x5	40-25	8B	.....	.....	.012	.016	AC	44 COM	14mm	.030	.018	.022	TC	100
ACR-750	Own 477	6-4½x5	40-25	8B	.....	.....	.012	.016	AC	44 COM	14mm	.030	.018	.022	TC	100
AFR-520	Own 308	6-3⅞x4½	40-25	4B	.....	.....	.012	.016	AC	44 COM	14mm	.030	.018	.022	TC	100
AFR-720	Own 426	6-4¼x5	40-25	8B	.....	.....	.012	.016	AC	44 COM	14mm	.030	.018	.022	TC	100
HUDSON																
58 (¾ ton Commercial)	Own	6-3x5	.....	10⅜B	.....	.010	.010	.012	Ch	J9	14mm	.032	.020	.....	.....	90
HUG																
15	Wau 6BL	6-3½x4¼	30-1000	TC	TC	.010	.006-.008	.010-.012	Ch	COM 7	18mm	.025	H	25°B	8B	112
19 (1939), 19W, 83W (1940); 6B6P-83W (1942)	Wau 6BK	6-3¾x4¼	40-1500	TC	TC	.010	.010-.012	.014-.016	Ch	COM 7	18mm	.025	H	25°B	8B	112
23	Bud H298	6-3¾x4½	30-1000	TC	TC	.006	.006	.008	Ch	COM 7	18mm	.025	H	27°B	9½B	83
42, 70	Bud K369	6-4⅛x4¾	30-1000	TC	TC	.006	.006	.008	Ch	COM 7	18mm	.025	H	30°B	10½B	82
43A, 43T, 87K, 87Q, 43-4, 87K4	Bud K428	6-4⅜x4¾	30-1000	TC	TC	.006	.006	.008	Ch	COM 7	18mm	.025	H	27°B	9½B	84
43L, 97L, 97LD, 87Q4	Bud L525	6-4½x5½	30-1000	TC	TC	.006	.006	.008	Ch	COM 7	18mm	.025	H	22°B	7¾B	83
99	Bud GF6	6-4¾x6	30-1000	5°A	2¼A	.010	.010C	.016C	Ch	COM 7	18mm	.025	H	20°B	8¾B	72
15W (1940-41)	Wau 6BM	6-3⅝x4¼	40-1500	TC	TC	.010	.010-.012	.014-.016	Ch	COM 7	18mm	.025	.025	25°B	8B	112
23W, 85W (1940-42)	Wau 6BZ	6-4x4¼	40-1500	TC	TC	.010	.010-.012	.014-.016	Ch	COM 7	18mm	.025	.025	25°B	8B	112
42W, 87W (1940-42), CB8P (1941-42)	Wau 6MZR	6-4¼x4¾	40-1500	8°A	3A	.004	.010-.012	.014-.016	Ch	COM 7	18mm	.025	.025	25°B	8B	90
43W, 46-4 (1940-42)	Wau 6GAL	6-5x5½	40-1500	TC	TC	.008	.010-.012	.014-.016	Ch	COM 7	18mm	.025	.025	25°B	8B	112
44-4 (1940-42)	Wau 6SRLR	6-4⅜x5⅛	40-1500	10°A	3A	.004	.008-.010	.016-.018	Ch	COM 2	⅞	.025	.025	22°B	7B	90
45-4, 92U (1940-42)	Wau 6SRKR	6-4⅝x5⅛	40-1500	10°A	3A	.004	.008-.010	.016-.018	Ch	COM 2	⅞	.025	.025	22°B	7B	80
98, 99, 99S, 98CD, 98MB (1940-42)	Wau 6RBR	6-5x5⅝	40-1500	10°A	4A	.008	.006-.008	.010-.012	Ch	COM 1	⅞	.025	.025	17°B	6B	78
23W, 85W (1941); CB7P (1942)	Wau 6BZ	6-4x4¼	40-1500	TC	TC	.010	.010-.012	.014-.016	Ch	COM 7	18mm	.025	.025	25°B	8B	90
51-6 (1942)	Her HXC	6-5¼x6	35-1600	5°B	.....	.015	.010	.016	Ch	QM-2	14mm	.025	.025	.....	.....	.....
INTERNATIONAL																
C1, C15, C30, CS30, C30S	Own HD3	6-3⅛x4⅛	25-600	TC	TC	.010	.010	.010	AC	G9	18mm	K	D	6°B	1¾B	95
A1, A2, B2, M2, M3, C10, C20, CS20	Wau XAH	4-3⅝x4½	20-2200	10°A	3A	.004	.005	.007	AC	A8	⅛	K	D	5°B	1½B	72
B3	Own FAB2	6-3⅛x4	40-1400	10°A	3A	.024	.015	.015	AC	A8	⅞	K	D	5°B	1½B	93
C5	Wau FK	4-3¼x4	20-600	.....	.....	.....	.....	.....	Ch	C7	18mm	.....	.....	.....	.....	.....
C35, C35B, CS35, CS35B, C35T, CS35T, B4, C40, CS40, C40T, C40F	Own FAB3	6-3⅛x4	40-1400	10°A	3A	.024	.015	.015	AC	A8	⅞	K	D	5°B	1½B	93
A4, A5, A6, C50, C50T	Own FBB	6-3⅝x4½	40-1800	10°A	3½A	.016	.015	.015	AC	A8	⅞	K	D	10°B	3½B	76
C55, C55F, C55T, C60, C60T	Own FBB3	6-3¾x4½	40-1800	10°A	3½A	.016	.015	.015	AC	A8	⅞	K	D	10°B	3½B	92
A7, A7F	Own FDB	6-4½x5½	40-1800	10°A	4½A	.011	.011	.013	AC	A8	⅞	K	D	5°B	2¼B	70
A8	Own FEB	6-5x5½	40-1700	10°A	4½A	.011	.011	.013	AC	A8	⅞	K	D	5°B	2¼B	78
D2, D15	Own HD213	6-3⅛x4⅛	25-600	TC	TC	.010	.010-.012	.012-.014	AC	D7	18mm	K	D	6°B	1¾B	93
D30, D530, D30B, DS30B, D300, DS300, D186T, DS186T	Own HD232	6-3⅛x4⅛	25-600	TC	TC	.010	.010-.012	.012-.014	AC	D7	18mm	K	D	6°B	1¾B	93
D35, DS35, D35B, D216T	Own FAB241	6-3⅝x4½	40-800	10°A	.....	.024	.015	.015	AC	A6	⅞	K	D	3°B	1B	94
D40	Own FAB259	6-3½x4½	40-1200	10°A	.....	.024	.015	.015	AC	A6	⅞	K	D	3°B	1B	99
D50, D246T, D246F, D500	Own FBB298	6-3¾x4½	40-1600	10°A	.....	.016	.015	.015	AC	A9	⅞	K	D	10°B	3½B	92
D60, DR60	Own FBB361	6-4⅛x4½	40-1400	5°A	.....	.016	.015	.015	AC	A9	⅞	K	D	10°B	3½B	89
DR70, DR346T, D346F, D700	Own FBB401	6-4½x5	40-1400	5°A	.....	.016	.015	.015	AC	A9	⅞	K	D	6°B	3½B	92
DR426F	Own FBB450	6-4⅝x5	40-1400	.....	.....	.016	.015	.015	AC	A9	⅞	K	D	10°B	3½B	89
AR626F	Own FEB648	6-5x5½	40-1100	7½°A	.....	.011	.011	.013	AC	A8	⅛	K	D	5°B	2°B	68
K1, K2, K3, K4, KS-4, K5, KS-5	Own GRD175	6-3x4½	25-600	10°B	.....	.020	.015	.017	AC	87S	18mm	R	D	4°B	.....	104
K1, K2, K3, K4, KS-4	Own GRD214	6-3⅛x4⅛	25-600	10°B	.....	.020	.015	.017	AC	87S	18mm	R	D	4°B	.....	107
K5, KS-5, K5COE	Own GRD233	6-3⅛x4⅛	25-600	10°B	.....	.020	.015	.017	AC	87S	18mm	R	D	4°B	.....	108
K6, K6-T, K6-F, KS6, KS6T	Own BLD250	6-3⅞x4½	40-1800	5°B	.....	.023	.015*	.015*	AC	43	14mm	R	D	3°B	.....	115
K7, K7-COE, KR7, KS7, KS7-COE	Own BLD269	6-3⅞x4½	40-1800	5°B	.....	.023	.015*	.015*	AC	43	14mm	R	D	3°B	.....	115
K8, K8-T, K8-F, KR8, KS8, K8-COE, KR8-COE, KS8-COE, KR8T, KS8T	Own FBC318	6-3⅞x4½	40-1800	5°A	.....	.016	.015*	.015*	AC	75	⅞	R	D	10°B	.....	95
K-10, KS10, KR10	Own FBC361	6-4⅛x4½	40-1800	5°A	.....	.016	.015*	.015*	AC	75	⅞	R	D	10°B	.....	89
KR11, KR11-T, K11-F, KR11-COE, KS11, KS11-COE, KS11T	Own FBC401	6-4⅛x5	40-1800	5°A	.....	.016	.015*	.015*	AC	75	⅞	R	D	6°B	.....	99
K12-F	Own FBC450	6-4⅝x5	40-1800	5°A	.....	.016	.015*	.015*	AC	75	⅛	R	D	10°B	.....	89
KR11, KS11	Own Red 450	6-4⅝x5	40-1500	8°B	.....	.023	E	E	AC	43	14mm	R	D	TC	.....	122
K8, K10	Own Red 361	6-4⅛x4½	40-1800	5°A	.....	.016	.015*	.015*	AC	75	14mm	R	D	10°B	.....	99
KENWORTH**																
88, 89, 89SBT, 89SW, 90	Her JXC	6-3¾x4¼	26-2600	6°A	.....	.006	.006	.006	Ch	1 COM	⅛	.025	.020	TC	TC	....
127	Her WXC	6-4x4½	26-2600	2°A	.....	.010	.006	.010	Ch	1 COM	⅛	.025	.020	TC	TC	....
128	Her WXC2	6-4⅛x4½	26-2600	2°A	.....	.010	.006	.010	Ch	1 COM	⅛	.025	.020	TC	TC	....
146B	Bud K393	6-4⅛x4¾	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
186	Her YXC2	6-4½x4¾	26-2600	2°A	.....	.010	.006	.010	Ch	1 COM	⅛	.025	.020	TC	TC	....
241	Her RXB	6-4½x5¼	26-2600	2°A	.....	.010	.006	.010	Ch	1 COM	⅛	.025	.020	TC	TC	....
513 (1938)	Her JXD	6-4x4¼	26-2600	5°A	.....	.008	.008	.010	.....	.....	⅛	.025	.020	TC	TC	....
525, 526, 527, 528, 541, 542 (1938-40-41-42)	Bud L0525	6-4½x5½	25-1000	10°B	.....	.009	.008	.012	.....	.....	14mm	.025	.020	10°B	.....	....
529, 530, 531, 532, 539, 540 (1938)	Bud K428	6-4⅜x4¾	25-1000	TC	TC	.006	.006	.008	.....	.....	18mm	.025	.015	10°B	.....	....
533, 534, 535 (1938)	Bud K393	6-4⅛x4¾	25-1000	TC	TC	.006	.006	.008	.....	.....	18mm	.025	.015	10°B	.....	....
536, 537, 538 (1938)	Her JXM	6-3¾x4¼	26-2600	5°A	.....	.006	.006	.006	.....	.....	⅛	.025	.020	TC	TC	....
553, 554, 555, 558 (1940-42)	Her WXLC3	6-4¼x4¾	26-2600	2°A	.....	.010	.006	.010	.....	.....	⅛	.025	.020	16°B	.....	....
536, 537, 538, 543, 544, 545, 560, 561, 562, 563 (1940-42)	Her JXDM	6-4x4¼	26-2600	5°A	.....	.008	.008	.010	.....	.....	⅜	.025	.020	TC	TC	....
505, 506, 507, 508, 509, 513, 514, 515, 516 (1941-42)	Cum HB4	4-4⅞x6	55-	5°B	.....	.....	.012	.015	.....	Diesel				.....	.....	.....
510, 511, 512, 519, 520, 521, 522, 523, 524, 548, 549, 550, 552, 584 (1941-46)	Cum HB6	6-4⅞x6	55-	5°B	.....	.....	.025	.025	.....	Diesel				.....	.....	.....
549, 550 (1941-42)	Cum HB6	6-4⅞x6	55-	5°B	.....	.....	.025	.025	.....	Diesel				.....	.....	.....

A—.019-.023
a—With Roto Valve, .010
AC—AC
AL—Auto-Lite
b—With Roto Valve, .016
Bud—Buda
C—Cold
C/A—Champion or Auto-Lite
Cat—Caterpillar
Ch—Champion
Con—Continenta
Cum—Cummins
D—.018-.024
d—With Roto Valve, .018
E—.018-.020
EE—.016-.018
F—30 to 40
H—.015-.025
HH—.013-.015C
Her—Hercules
K—.020-.025
KK—.010-.012C
Lyc—Lycoming
M—5°B for CC450, 3°B for CF450
N—Varies with compression ratio
O—1800-2100
Opt—Optional
P—.018-.023
R—.028-.032
RR—1° 52½' A
S—.023-.028
T—.025-.028
TC—Top Center
V—.012-.014
Var—Variable
Wau—Waukesha
Y—.011-.012C
YY—.014-.016
Z—.018-.022
ZZ—.025-.030



TRUCK MAKE AND MODEL	Standard Engine Make and Model **	Number of Cylinders, Bore and Stroke	Normal Oil Pressure Lb. at M.P.H. or R.P.M.	Intake Valve Opens B-Before A-After		Intake Tappet Clearance for Valve Timing	OPERATING TAPPET CLEARANCE (Hot unless noted)		SPARK PLUG				Breaker Point Gap	Spark Occurs °TC B-Before A-After	Spark Occurs Fly-Wheel Teeth °TC B-Before A-After	Comp. Pressure at Cranking Speed
				°TC	Flywheel Teeth TC		Intake	Exhaust	Make	Type	Size	Gap				
KENWORTH—Continued																
549, 550 (1941-42)	Cum HBS6	6-4⅞x6	55-	77°B	.....	.....	.025	.025	.....	Diesel		.....	.....	.....	.....	.....
543, 544, 545, 546, 559 (1941-42)	Cum AA600	6—4x5	55-	.....	.....	.....	.....	.....	.....	Diesel		.....	.....	.....	.....	.....
529, 530, 531 (1941-42); 556 (1942); 532 (1942-46)	Wau 6MZR	6-4¼x4¾	40-1500	8°A	.....	.....	.008	.014	.....	.....	14mm	.020	.....	.....	.....	.....
564, 565, 566, 567 (1941-42)	Cat D468	6-4½x5½	15-45	.....	.....	.....	.010	.010	.....	.....	.....	.....	.....	.....	.....	.....
525, 528, 587 (1942-46)	Bud Lo-525	6-4½x5½	25-1000	10°B	.....	.009	.008	.012	.....	.....	14mm	.025	.020	10°B	.....	.....
585 (1946)	Con R6602	6-4⅞x5⅜	50-50	17B	.....	.0245	.020	.020	.....	.....	18mm.	.....	.....	.....	.....	106
LA FRANCE REPUBLIC																
C3, D4, E4	Wau 6BK	6-3¾x4¼	40-	TC	TC	.010	.006-.008	.010-.012	AC	86	18mm	.025	.....	.....	.....	112
F4, H6	Wau 6MK	6-4½x4¾	40-	8°A	3°A	.004	.004-.006	.012-.014	AC	86	18mm	.025	.....	.....	.....	80
K1	Wau 6SRL	6-4⅜x5½	40-	10°A	3A	.004	.006-.008	.016-.018	AC	76	⅛	.025	.....	.....	.....	80
M4	Wau 6-125	6-4⅜x5½	40-	42°B	15B	.010	.010-.012	.018-.020	AC	85	18mm	.025	.....	.....	.....	96
EH5B, EH5D, EH6B, EH6D	Wau 6BZ	6-4x4¼	40-1500	5°A	2A	.010	.010-.012	.014-.016	AC	86	18mm	.025	.....	.....	.....	112
FH5B, FH5D, HH7	Wau 6MZR	6-4¼x4¾	40-1500	8°A	3A	.004	.008-.010	.014-.016	AC	86	18mm	.025	.....	.....	.....	90
KH2	Wau 6SRLR	6-4⅜x5½	40-1500	8°A	3A	.004	.008-.010	.016-.018	AC	76	⅛	.025	.....	.....	.....	96
MH5	Wau 6SRKR	6-4⅝x5½	40-1500	8°A	3A	.004	.008-.010	.016-.018	AC	76	⅛	.025	.....	.....	.....	96
MARMON-HERRINGTON																
A10-4	Her JXA	6-3⅜x4¼	26-2600	2°A	⅛A	.010	.006	.006	Ch	1 COM	⅛	.025	.020	TC	TC	96
A30-4	Her WXC	6-4x4½	26-2600	2°A	¾A	.010	.008	.010	Ch	1 COM	18mm	.025	.020	TC	TC	92
A40-4, A50-4	Her WXC3	6-4½x4½	26-2600	2°A	¾A	.010	.006	.010	Ch	1 COM	18mm	.025	.020	TC	TC	92
TH300-4	Her YXC	6-4⅜x4¾	23-2600	2°A	¾A	.010	.006	.010	Ch	1 COM	18mm	.025	.020	TC	TC	91
TH310-4	Her YXC3	6-4⅝x4¾	23-2600	2°A	¾A	.010	.006	.010	Ch	1 COM	18mm	.025	.020	TC	TC	91
TH310A-4, TH310A-6	Her RXC	6-4⅝x5¼	25-2600	2°A	¾A	.010	.006	.010	Ch	1 COM	18mm	.025	.020	TC	TC	103
TH315-4, TH315-6	Her HXB	6-5x6	35-1600	5°B	2B	.015	.010	.016	Ch	1 COM	18mm	.025	.020	TC	TC	105
TH320-4, TH320-6	Her HXC	6-5¼x6	35-1600	5°B	2B	.015	.010	.016	Ch	1 COM	18mm	.025	.020	TC	TC	105
B10-4, C10-4, DSD100-4	Her JXB	6-3⅝x4¼	25 Max.	2°A	⅛A	.010	.006	.006	Ch	2 COM	⅛	.025	.020	TC	TC	96
A20-4, B20-4, C20-4, C20-6, DSD200-4, DSD200-6	Her JXC	6-3¾x4¼	25 Max.	2°A	⅛A	.010	.006	.006	Ch	2 COM	⅛	.025	.020	TC	TC	114
B30-4, C30-4, C30-6, DSD300-4, DSD300-6	Her JXD	6-4x4¼	25 Max.	2°A	⅛A	.010	.006	.006	Ch	2 COM	⅛	.025	.020	TC	TC	114
B40-4, B40-6, C40-4, C40-6, DSD400-4, B50-4, B50-6, C50-4, C50-6, DSD500-4, DSD500-6	Her WXC3	6-4¼x4½	25 Max.	2°A	¾A	.010	.008	.010	Ch	8 COM	18mm	.025	.020	TC	TC	92
B60-4, C55-4, C55, DR4, C60-4, C60-6, DSD550, DR4, DSD600-4, DSD600-6	Her RXB	6-4½x5½	25 Max.	2°A	¾A	.010	.008	.010	Ch	8 COM	18mm	.025	.020	TC	TC	103
B70-4, B70-6, C70-4, DSD700-4, DSD700-6	Her RXB	6-4½x5¼	25 Max.	2°A	¾A	.010	.008	.010	Ch	8 COM	18mm	.025	.020	TC	TC	103
B80-4, B80-6, C80-4, C80-6 DSD800-4, DSD800-6	Her RXC	6-4⅝x5¼	25 Max.	2°A	¾A	.010	.008	.010	Ch	8 COM	18mm	.025	.020	TC	TC	103
TH415-4, TH415-6, TH515-4, TH515-6	Her HXB	6-5x6	25 Max.	5°B	2B	.015	.010	.016	Ch	8 COM	18mm	.025	.020	TC	TC	105
TH420-4, TH420-6, DSD900-4, DSD900-6	Her HXD	6-5½x6	25 Max.	5°B	2B	.015	.010	.016	Ch	8 COM	18mm	.025	.020	TC	TC	105
B5-4x4, B6-4x4, B5-6x6, B6-6x6, B5-6x4, B6-6x4	Ford V8	8-3 1/16x3¾	40 Max.	9½°B	.....	Y	Y	Y	Ch	7 COM	18mm	.025	.020	TC	TC	95
TH520-4, TH520-6, DSD1000-4, DSD1000-6	Her HXE	6-5¾x6	25 Max.	5°B	2B	.015	.010	.016	Ch	8 COM	18mm	.025	.020	TC	TC	105
LD1, CSA-4, CSB-4, C5-4, C6-4, C5-6, C-6 (1937)	Ford V8	8-3 1/16x3¾	40 Max.	.....	.....	Y	Y	Y	.....	.....	18mm	.025	YY	4°B	.....	100
LD2-4, E5-4, E5-6, E6-4, E6-6 (1938)	Ford V8	8-3 1/16 3¾	30-2000	TC	TC	Y	Y	Y	Ch	8 COM	14mm	.025	YY	4°B	.....	100
LD3-4, F5-4, F6-4, F5-6, F6-6, OT2-4, (1939)	Ford 85	8-3 1/16x3¾	30-2000	TC	TC	Y	Y	Y	Ch	8 COM	14mm	.025	YY	4°B	.....	100
FF5-4, FF6-4, FF5-6, FF6-6, OOT2-4 (1939)	Ford 95	8-3 1/16x3⅛	30-2000	TC	TC	Y	Y	Y	Ch	8 COM	14mm	.025	YY	4°B	.....	100
H5-4, H6-4, H5-6, H6-6, LD4-4, OT3-4 (1940)	Ford 85	8-3 1/16x3¾	30-2000	TC	TC	Y	Y	Y	Ch	H10	14mm	.025	YY	4°B	.....	100
HH5-4, HH6-4, HH5-6, HH6-6, LLD4-4, OOT3-4 (1940)	Ford 95	8-3 1/16x3⅛	30-2000	TC	TC	Y	Y	Y	Ch	H10	14mm	.025	YY	4°B	.....	100
J5-4, J5-6, J6-4, J6-6, LD5-4, OT4-4 (1941)	Ford 85	8-3 1/16x3¾	30-2000	TC	TC	Y	Y	Y	Ch	H10	14mm	.025	YY	4°B	.....	100
JJ5-4, JJ6-4, JJ5-6, JJ6-6, LLD5-4, OOT4-4 (1941)	Ford 95	8-3 1/16x3¾	30-2000	TC	TC	Y	Y	Y	Ch	H10	14mm	.025	YY	4°B	.....	100
LD6, P-4, LD6-4, OT5-4, M5-4, M6-4, M5-6, M6-6, M5-COE-4, M6-COE-4, M5-COE-6, M6-COE-6, (1942-45)	Ford 90	8-3 1/16x3¾	30-2000	TC	TC	Y	Y	Y	Ch	8 COM	14mm	.025	YY	4°B	.....	100
LLD6, P-4, LLD6-4, OOT5-4, MM5-4, MM6-4, MM5-6, MM6-6, MM5-COE-4, MM6-COE-4, MM5-COE-6, MM6-COE-6, (1942-45)	Ford 100	8-3 1/16x3¾	30-2000	TC	TC	Y	Y	Y	Ch	8 COM	14mm	.025	YY	4°B	.....	100
6LD6, P-4, 6LD6-4, 6OT5-4, 6M5-4, 6M6-4, 6M5-6, 6M6-6, 6M5-COE-4, 6M6-COE-4, 6M5-COE-6, 6M6-COE-6 (1942-45)	Ford 6-90	6-3.3x4.4	30-2000	3°B	.....	.015	.015	.015	Ch	8 COM	14mm	.025	YY	4°B	.....	100
MH440-4	Her WXLC3	6-4¼x4⅝	36-1600	2°A	Bar	.010	.006	.010	Ch	H-10	14mm	.025	.020	TC	TC	....
MH555-4	Her RXC	6-4⅝x5¼	26-2600	2°A	¾A	.010	.006	.010	Ch	No. 8	18mm	.025	.020	TC	TC	103
DVL-1	Willys CJ-2A	4-3⅛x4⅜	50-30	9°B	.....	.017	.014	.014	Al	AN-7	14mm	.030	.020	TC	TC	115
OSHKOSH																
WLX	Her WXC2	6-4½x4½	26-2600	2°A	.....	.006	.006	.010	Ch	1 COM	⅛	.025	.020	.....	.....	95
JCB	Her JXC	6-3¾x4¼	26-2600	5°A	.....	.008	.008	.010	Ch	1 COM	⅛	.025	.020	.....	.....	115
JD	Her JXD	6-4x4¼	26-2600	5°A	.....	.008	.008	.010	Ch	1 COM	⅛	.025	.020	.....	.....	115
FD, FB-35, FB, W700	Her RXC	6-4⅝x5¼	26-2600	2°A	.....	.006	.006	.010	Ch	1 COM	⅛	.025	.020	.....	.....	110
B3S, B3D, WLD, W300, W2300	Her WXC3	6-4¼x4½	26-2600	2°A	.....	.006	.008	.010	Ch	1 COM	⅛	.028	.020	.....	.....	95
C3S, C3D, W400	Her YXC2	6-4½x4⅝	26-2600	2°A	.....	.006	.006	.010	Ch	1 COM	⅛	.025	.020	.....	.....	95
FC-35, R3S, FS, FC, W500, W600	Her RXB	6-4½x5¼	26-2600	2°A	.....	.006	.006	.010	Ch	1 COM	⅛	.025	.020	.....	.....	110
BG3	Her HXB	6-5x6	35-1600	5°B	.....	.010	.010	.016	Ch	1 COM	⅛	.025	.020	.....	.....	100
GD	Her HXE	6-5¾x6	35-1600	5°B	.....	.010	.010	.016	Ch	1 COM	⅛	.025	.020	.....	.....	115
W800, W703	Her RXLD	6-4¾x5¼	26-2600	2°A	.....	.006	.006	.010	Ch	1 COM	⅛	.025	.020	.....	.....	110
W-400	Her YXC3	6-4⅝x4⅜	26-2600	2°A	.....	.006	.006	.010	Ch	1 COM	⅛	.025	.020	.....	.....	95
W-100	Her JXC	6-3¾x4¼	26-2600	5°A	.....	.008	.008	.010	Ch	1 COM	⅛	.025	.020	.....	.....	115
W-200	Her JXD	6-4x4¼	26-2600	5°A	.....	.008	.008	.010	Ch	1 COM	⅛	.025	.020	.....	.....	115
W-900, W906	Cum HB600	6-4⅞x6	55-	15°A	.....	.....	.025	.025	.....	.....	.....	.....	.....	.....	.....	.....

TURN TO NEXT PAGE, PLEASE

ENGINE TUNE-UP

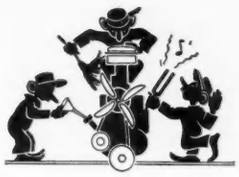
Specifications

(Continued from Page 59)

*—Severe Service .018
**—If optional engine model is used, see specification under engine manufacturer's listing.
•—Minimum
†—46 for AF240, AFP240, CCV100
††—Commercial 8AB, 18mm. plugs for 1941 models; J9, 14mm. for 1942 models
‡—Heavy duty plug; for light duty use H-10
(1)—Timing is for H models, Spark of G models variable

TRUCK MAKE AND MODEL	Standard Engine Make and Model **	Number of Cylinders, Bore and Stroke	Normal Oil Pressure Lb. at M.P.H. or R.P.M.	Intake Valve Opens B-Before A-After		Intake Tappet Clearance for Valve Timing	OPERATING TAPPET CLEARANCE (Hot unless noted)		SPARK PLUG				Breaker Point Gap	Spark Occurs °TC B-Before A-After	Spark Occurs Fly-Wheel Teeth °TC B-Before A-After	Comp. Pressure at Cranking Speed
				°TC	Flywheel Teeth TC		Intake	Exhaust	Make	Type	Size	Gap				
PETERBILT																
344DT, 354DT, 270DD, 345DT, 355DT (1944-45)	Cum HB6	6-4⅞x8	55-	15°A	.....	.....	.025	.025	Diesel		.....	.....	.....	.....	.....	.....
REO																
1B4, 1D4	Own	6-3½x5	40 Max.	TC	TC	.012	.008	.010	Ch	C7	18mm	.025	.020	10°B	4B	80
1B, 1D	Own	6-3½x5	40 Max.	TC	TC	.012	.008	.010	Ch	C7	18mm	.025	.020	10°B	3B	80
2L, 2B, 2D	Own	6-3⅝x5	40 Max.	TC	TC	.012	.008	.010	Ch	C7	18mm	.025	.020	10°B	3B	80
2B4, 2D4, 2L4	Own	6-3⅝x5	40 Max.	TC	TC	.012	.008	.010	Ch	C7	18mm	.025	.020	10°B	4B	80
2H, 2J, 2K, 3H, 3J, 3K, 3M	Own	6-3⅝x5	40 Max.	TC	TC	.012	.008	.010	Ch	C7	18mm	.025	.020	10°B	4B	80
4H, 4J, 4K, 4M	Own	6-3⅝x5	40 Max.	TC	TC	.012	.008	.010	Ch	C7	18mm	.025	.020	10°B	4B	80
6AP, 1A4, 1C4 (1936)	Own	6-3¾x4⅜	30-2000	2°B	½B	.012	.008	.010	Ch	C7	18mm	.025	.020	3°B	1B	85
1A4H, 1C4H, 1B4, 1D4, 2D4M (1936)	Own	6-3⅝x4¼	40 Max.	5°B	2B	.012	.008	.010	Ch	C7	18mm	.025	.020	10°B	4B	85
1B4H, 1D4H, 2D4MH, 2B4, 2D4, 2H5, 2J5, 3H5, 3J5, 3K5, 3HR5, 3JR5, 3KR5 (1936)	Own	6-3⅝x5	40 Max.	TC	TC	.012	.008	.010	Ch	C7	18mm	.025	.020	10°B	4B	80
4H5, 4J5, 4K5 (1936-1937)	Bud K428	6-4⅜x4¾	40-20	TC	TC	.006	.006	.010	Ch	C7	18mm	.025	.020	10°B	.....	70
450, 475 (1937)	Own S140	4-3½x4⅜	35-20	TC	TC	.012	.008	.010	Ch	H10	14mm	.032	.020	5°B	1½B	90
650, 675, 1A4, 1C4 (1937)	Own S209	6-3¼x4⅜	35-20	2°B	½B	.012	.008	.010	Ch	H10	14mm	.032	.020	2°B	½B	90
1A4H, 1C4H, 1B4, 1D4 (1937)	Own S228	6-3⅝x4¼	35-20	5°B	2B	.012	.008	.010	Ch	H10	14mm	.032	.020	8½°B	3½B	80
1B4H, 1D4H (1937)	Own S3	6-3⅝x5	35-20	18°A	7½A	.012	.008	.010	Ch	H10	14mm	.032	.020	8½°B	3½B	80
2B4, 2D4, 2H5, 2J5 (1937)	Own S3	6-3⅝x5	35-20	TC	TC	.012	.008	.010	Ch	H10	14mm	.032	.020	8½°B	3½B	80
3H5, 3J5, 3K5, 3HR5, 3JR5, 3KR5 (1937)	Own S5	6-3⅝x5	35-20	TC	TC	.012	.008	.010	Ch	H10	14mm	.032	.020	8°B	3B	80
450, 450L, 475, 475L (1938)	Own S140	4-3½x4⅜	35-	2°B	½B	.....	.008	.012	Ch	H10	14mm	.032	.020	6°B	1¾B	85
650, 650L, 675, 675L, 1A4, 1C4, 1L5 (1938)	Own S209	6-3¼x4⅜	35-	TC	TC	.....	.008	.012	Ch	H10	14mm	.032	.020	2°B	1¾B	85
1A4H, 1C4H, 1B4, 1D4, 1BM7, 2BM7 (1938)	Own S228	6-3⅝x4¼	40-	5°B	.....	.....	.008	.010	Ch	H10	14mm	.032	.020	8°B	3¾B	80
1B4H, 1D4H (1938)	Own S3L	6-3⅝x5	40-	TC	TC	.....	.008	.010	Ch	H10	14mm	.032	.020	6°B	3½B	80
2B4, 2D4, 2J5, 2H5, 2L4, 2L7M (1938)	Own S3	6-3⅝x5	40-	8°B	.....	.....	.008	.010	Ch	H10	14mm	.032	.020	8°B	3½B	80
2L4H, 2L7MH, 3H5, 3J5, 3K5, 3HR5, 3JR5, 3KR5 (1938)	Own S5	6-3⅝x5	40-	TC	TC	.....	.008	.010	Ch	H10	14mm	.032	.020	8°B	3B	.....
4H5, 4J5, 4K5, 3L6H (1938)	Bud K428	6-4⅜x4¾	30-	TC	TC	.....	.006	.006	Ch	C7	18mm	.025	.020	10°B	1B	70
19 (1940)	Own GC228	6-3⅝x4¼	40-	5°B	2B	.012	.008	.010	Ch	JC10	14mm	.032	.018	8°B	3B	105
20, 21 (1940), 19BHS, 19CHS, 20XS (1944-46)	Own GC245	6-3½x4¼	40-	5°B	2B	.012	.008	.010	Ch	JC10	14mm	.032	.018	8°B	3B	105
22 (1940), 21 (1942), 20BHS, 20XHS (1944-46)	Own GC288	6-3½x5	40-	5°B	2B	.012	.008	.010	Ch	JC10	14mm	.032	.018	8°B	3½B	105
23 (1940), 22 (1942)	Own GC310	6-3⅝x5	40-	5°B	2B	.012	.008	.010	Ch	JC10	14mm	.032	.018	8°B	3½B	105
4D19 (1941)	Bud 4DT226	4-3¾x5½	30-40	TC	TC	.009	.009	.012	.....	.....	.....	.....	.....	.....	.....	390
6D19 (1941)	Bud 6DT294	6-3⅝x4¾	30-40	20°B	.....	.009	.009	.012	.....	.....	.....	.....	.....	.....	.....	600
D20 (1941)	Bud 6DT317	6-3⅝x5½	30-40	20°B	.....	.009	.019	.012	.....	.....	.....	.....	.....	.....	.....	.....
23H (1942)	Wau 6MKR	6-4¼x4¾	35-1500	8°A	3A	.004	.010	.012	Ch	62	18mm	.025	.020	TC	TC	80
25 (1942)	Wau 6MZR	6-4¼x4¾	35-1500	8°A	3A	.004	.010	.012	Ch	62	18mm	.025	.020	TC	TC	80
27 (1942)	Wau 6SRKR	6-4⅝x5½	40-1500	8°A	3A	.004	.010	.012	Ch	0 COM	18mm	.025	.020	TC	TC	90
25VBS, 25VXS (1944-46)	Con B6427	6-4⅛x4⅜	40-50	.....	.....	.022	.020C	.020C	.....	8 COM	18mm	.030	.....	.....	.....	124
27VXS (1944-45)	Con R-22	6-4½x5¼	40-50	.....	.....	.014	.014C	.020C	.....	8 COM	18mm	.030	.....	.....	.....	100
23XHS (1945)	Con B6371	6-4½x4⅝	30-40	6½°B	.....	.022	.020C	.020C	Ch	C8	18mm	.025	.....	.....	.....	124
STERLING																
FB50 Del, FB60 Del, FB70 Del, FC90, FB70, FBT130	Wau 6BK	6-3¾x4¼	40-1500	TC	TC	.010	.010-.012	.014-.016	AC	86	18mm	.025	.....	.....	.....	112
FB80, FD90	Wau 6MK	6-4¼x4¾	40-1500	8°A	3A	.004	.008-.010	.014-.016	AC	86	18mm	.025	.....	.....	.....	80
FC100, FD97	Wau 6SRL	6-4¾x5⅛	40-	10°A	3A	.004	.006-.008	.016-.018	AC	78	⅞	.025	.....	.....	.....	80
FDS180, FC135, FD115	Wau 6-125	6-4⅝x5⅛	40-	42°B	15B	.010	.010-.012	.018-.020	AC	85	18mm	.025	.....	.....	.....	96
FBT152	Wau 6MZ	6-4¼x4¾	40-	8°A	3A	.004	.008-.010	.014-.016	AC	86	18mm	.025	.....	.....	.....	80
FBT152	Wau 6-110	6-4x4¾	40-	15°B	5B	.010	.010-.012	.014-.016	AC	D8	18mm	.025	.....	.....	.....	97
HC185, HC200, HC250, HC170, HCS210	Wau 6RB	6-5x5¾	40-	10°A	4A	.008	.006-.008	.010-.012	AC	76	⅞	.025	.....	.....	.....	76
MB75, MD75, MS75, MD85, MB85	Wau 6BZ	6-4x4¼	40-1500	5°A	2A	.010	.010-.012	.014-.016	AC	86	18mm	.025	.....	.....	.....	112
MB90, MD90	Wau 6MKR	6-4¼x4¾	40-1500	8°A	3A	.004	.008-.010	.014-.016	AC	86	18mm	.025	.....	.....	.....	90
JB90, JD90, HD105, HC105, HBT128, HWS128, HDS128	Wau 6MZR	6-4¼x4¾	40-1500	5°A	3A	.004	.008-.010	.014-.016	AC	86	18mm	.025	.....	.....	.....	90
HD110, HD115, HC115	Wau 6SRLR	6-4¾x5⅛	40-1500	8°A	3A	.004	.008-.010	.016-.018	AC	86	⅞	.025	.....	.....	.....	96
JAD135, JD137, HD145, HD165, JC137, JC145, HC145, HC147, HC156, HC165, HC175, JDS160, JWS160, HWS235S, HDS235S, HCS225	Wau 6SRKR	6-4⅝x5½	40-1500	8°A	3A	.004	.008-.010	.016-.018	AC	76	⅞	.025	.....	.....	.....	96
HC185, HC200, HC250, HC255, HCS285, HCS300	Wau 6RBR	6-5x5¾	40-1500	10°A	4A	.008	.006-.008	.010-.012	AC	76	⅞	.025	.....	.....	.....	90
STEWART																
40A (1938)	Con F4162	4-3⅞x4⅜	40-2800	.....	.....	.010	.010	.014	Ch	7 COM	18mm	.025	.025	TC	TC	105
60A (1938)	Con F6170	6-3x4	40-2800	2°B	½B	.010	.010	.014	Ch	7 COM	18mm	.025	.025	.....	.....	.....
61A (1938)	Con F6218	6-3½x4¾	40-2800	2°B	½B	.012	.012	.018	Ch	7 COM	18mm	.025	.025	.....	.....	97
45A, 45AS (1938)	Wau 6ZKA	6-3⅜x4⅛	40-2800	8°A	2A	.010	.010	.016	Ch	7 COM	18mm	.025	.025	.....	.....	111
47A, 50A, 50AS (1938)	Wau 6BM	6-3⅝x4⅛	40-2800	TC	TC	.010	.010	.016	Ch	7 COM	18mm	.025	.025	.....	.....	111
49A (1938)	Wau 6BK	6-3¾x4¼	45-2800	TC	TC	.010	.010	.016	Ch	7 COM	18mm	.025	.025	.....	.....	112
51A (1938)	Con E602	6-4¼x4¼	45-2800	TC	TC	.017	.017	.017	Ch	7 COM	18mm	.025	.025	TC	TC	102
58A (1938)	Wau 6MZ	6-4¼x4¾	40-2800	8°A	3A	.010	.012	.018	Ch	7 COM	18mm	.025	.025	.....	.....	90
38-6, 31X (1938)	Wau 6SRK	6-4⅝x5⅛	45-2200	10°A	3A	.010	.012	.018	Ch	2 COM	⅞	.025	.025	.....	.....	80
45GL (1938)	Wau 6BL	6-3½x4¼	40-2800	TC	TC	.010	.010	.016	Ch	7 COM	18mm	.025	.025	.....	.....	111
49A (1941-42)	Wau 6BZ	6-4x4¼	40-2800	TC	TC	.010	.010	.016	Ch	7 COM	18mm	.025	.025	.....	.....	112
58A, 59A (1941-42)	Wau 6MZR	6-4¼x4¾	40-2800	8°A	3A	.010	.012	.018	Ch	7 COM	18mm	.025	.025	.....	.....	90
38A (1941-42)	Wau 6SRKR	6-4⅝x5½	40-2800	10°A	3A	.010	.012	.018	Ch	7 COM	18mm	.025	.025	.....	.....	80
STUDEBAKER																
12, T4, T6, T8	Own	6-3¼x4⅝	20 Min.	5°A	1½A	.010	.006	.010	Ch	7	18mm	.025	.020	1°B	.....	70
2T2, 2M2, 2TB2 (1936)	Own	6-3¼x4⅜	20 Min.	5°B	.....	.020	.016	.016	Ch	8	18mm	.025	D	2°B	1B	.....
2W6, 2M6, 2MB6 (1936)	Wau 6BM	6-3⅝x4¼	20 Min.	TC	TC	.010	.012	.014	Ch	7	18mm	.025	D	TC	TC	.....
2W7 (1936)	Wau 6BK	6-3¾x4¼	20 Min.	TC	TC	.010	.012	.014	Ch	7	18mm	.025	D	TC	TC	.....
W8, 2W8 (1936)	Wau 6-110	6-4x4¾	20 Min.	15°B	.....	.010	.012	.016	Ch	6M	18mm	.025	D	3°B	1B	80

A—.019-.023
a—With Roto Valve, .010
AC—AC
AL—Auto Lite
b—With Roto Valve, .016
Bud—Buda
C—Cold
C/A—Champion or Auto-Lite
Cat—Caterpillar
Ch—Champion
Con—Continenta
Cum—Cummins
D—.018-.024
d—With Roto Valve, .018
E—.018-.020
EE—.016-.018
F—30 to 40
H—.015-.025
HH—.013-.015C
Her—Hercules
K—.020-.025
KK—.010-.012C
Lyc—Lycoming
M—5°B for CC450, 3°B for CF450
N—Varies with compression ratio
O—1800-2100
Opt—Optional
P—.018-.023
R—.028-.032
RR—1° 52½′ A
S—.023-.028
T—.025-.028
TC—Top Center
V—.012-.014
Var—Variable
Wau—Waukesha
Y—.011-.012C
YY—.014-.016
Z—.018-.022
ZZ—.025-.030



TRUCK MAKE AND MODEL	Standard Engine Make and Model **	Number of Cylinders, Bore and Stroke	Normal Oil Pressure Lb. at M.P.H. or R.P.M.	Intake Valve Opens B-Before A-After		Intake Tappet Clearance for Valve Timing	OPERATING TAPPET CLEARANCE (Hot unless noted)		SPARK PLUG				Breaker Point Gap	Spark Occurs °TC B-Before A-After	Spark Occurs Fly-Wheel Teeth °TC B-Before	Comp. Pressure at Cranking Speed
				°TC	Flywheel Teeth TC		Intake	Exhaust	Make	Type	Size	Gap				
STUDEBAKER—Continued																
J5 (1937)	Own	6-3¼x4⅝	40 Min.	5°B	1¾B	.020	.016C	.016C	Ch	8	18mm	.025	.020	2°B	¾B	101
J15, J15M, J15B (1937)	Own	6-3¼x4⅝	20 Min.	5°B	1¾B	.020	.016C	.016C	Ch	8	18mm	.025	.020	2°B	¾B	101
J20, J20M, J20B (1937)	Her JXB	6-3⅝x4¼	35 Min.	2°A	5/16A	.010	.008	.010	Ch	2 COM	⅞	.025	.020	TC	TC	96
J25, J25M, J25B (1937)	Her JXD	6-4x4¼	35 Min.	5°A	1½A	.010	.008	.010	Ch	1 COM	⅞	.025	.020	TC	TC	95
K30, K30M, J30, J30M (1937-38)	Her WXC3	6-4¼x4½	35 Min.	2°A	¾A	.010	.006	.010	Ch	1 COM	⅞	.025	.020	TC	TC	90
K5 (1938)	Own T	6-3 7/16x4⅜	40 Min.	15°B	5½B	.020	.016C	.016C	Ch	8A	18mm	.025	D	2°B	¾B	95
K10 (1938-40)	Own OT	6-3 7/16x4⅜	40 Min.	2½°B	1B	.020	.016C	.016C	Ch	8A	18mm	.025	D	2°B	¾B	95
K15, K15B, K15M (1938-40)	Own IT	6-3 7/16x4⅜	40 Min.	15°B	5½B	.020	.016C	.016C	Ch	8A	18mm	.025	D	2°B	¾B	95
K20, K20M, K20MB (1938-40)	Her HXB	6-3⅝x4¼	35 Min.	2°A	5/16A	.010	.006	.006	Ch	7	18mm	.025	D	TC	TC	95
K25, K25M, K25MB (1938-40)	Her JXD	6-4x4¼	35 Min.	5°A	1½A	.010	.006	.006	Ch	7	18mm	.025	D	TC	TC	95
M5 (1941-46)	Own	6-3x4	40 Min.	15°B	5B	.020	.016C	.016C	Ch	J9	14mm	.025	D	2°B	¾B	105
M15 (1941-45), M15A (1946)	Own	6-3x4	40 Min.	15°B	5B	.020	.016C	.016C	Ch	J9	14mm	.025	D	2°B	¾B	105
M18 (1941-46)	Own	6-3 1/16x4⅜	40 Min.	15°B	5½B	.020	.016C	.016C	Ch	J9††	14m††	.025	D	2°B	¾B	105
WALTER																
FN, FZM (1943-45)	Wau MZR	6-4¼x4¾	40-1500	8°A	3A	.004	.008-10C	.014-16C	Opt	.....	18mm	.025	.018	Var	.....	90
FKM, FCK, FC, FCR (1943-45)	Wau SRKR	6-4⅝x5½	40-1500	8°A	3A	.004	.008-10C	.014-16C	Opt	.....	⅞	.025	.018	Var	.....	90
FGB, FGR (1943-45)	Wau 145GK	6-5¼x6	40-1500	5°A	2A	.006	.009-11C	.024-26C	Opt	.....	18mm	.025	.018	16B(1)	.....	130
WARD LA FRANCE																
Ward La France D-1	Con-B-6427	6-4 1/16x4⅞	40-65	.....	.....	.....	.018	.018	Ch	8 COM	18mm	.025	.020	5°BTC	.....	....
D-1B	Con-22R	6-4½x5¼	30-40	.....	.....	.....	.014	.020	Ch	8 COM	18mm	.025	.020	TDC	.....	....
D-1C	Con-B-6427	6-4 1/16x4⅞	40-65	.....	.....	.....	.018	.018	Ch	8 COM	18mm	.025	.020	5°BTC	.....	....
D-2	Con-R-6513	6-4½x5⅜	40-60	.....	.....	.....	.020	.020	Ch	8 COM	18mm	.025	.020	5°BTC	.....	....
D-3	Con R6572	6-4⅝x5⅜	40-60	.....	.....	.....	.020	.020	Ch	8 COM	18mm	.025	.020	5°BTC	.....	....
D-3 Spec.	Con R6602	6-4⅞x5⅜	40-60	.....	.....	.....	.020	.020	Ch	8 COM	18mm	.025	.020	5°BTC	.....	....
WHITE																
58S, 59, 59A, 64, 640, 641, 642, 643	Own 1A	6-4⅜x5¾	40-2000	TC	TC	.032	.020	.025	AC	E	⅞	P	A	8°A	3A	....
60, 601C, 601, 602, 61	Own 2A	6-3½x4½	40-2400	TC	TC	.015	.010	.012	AC	E	⅞	P	A	TC	TC	....
51AS, 58S, 59A, 620, 621, 63, 630, 631, 63K	Own 3A	6-4x5¼	40-2400	TC	TC	.032	.020	.025	AC	E	⅞	P	A	TC	TC	....
61, 611, 612, 612K, 618, 618K	Own 4A	6-3¾x4½	40-2400	TC	TC	.015	.015	.015	AC	E	⅞	P	EE	TC	TC	....
54, 640, 640K, 641, 641K, 642, 643, 681	Own 5A	6-4⅝x5¾	40-2500	TC	TC	.032	.020	.025	AC	D	18mm	P	EE	TC	TC	....
620, 620K, 621, 621K, 630, 630K, 631, 631K	Own 7A	6-4⅜x5¼	40-2100	TC	TC	.032	.020	.025	AC	E	⅞	P	EE	TC	TC	....
701, 702, 707	Own 8A	6-3 7/16x4⅝	35 Max.	5°A	1½A	.010	.020	.020	AC	W	18mm	S	EE	5°B	1½B	....
712, 718	Own 9A	6-3½x4½	40-2400	10°B	.....	.010	.012	.020	AC	K	14mm	P	A	7°B	.....	....
703, 704, 704K, 709, 708, 805, 809	Own 11A	6-3 7/16x4½	40-2500	10°B	3½B	.010	.012	.020	AC	K	14mm	T	D	7°B	4B	....
704K2, 712SL, 710, 810 (1936-37)	Own 13A	6-3½x4½	40 Max.	10°B	3½B	.010	.012	.020	AC	K	14mm	T	P	7B	.....	....
720, 720T (1936)	Own 14A	6-4x5¼	40 Max.	TC	TC	.032	.020	.025	AC	E	⅞	A	D	TC	TC	....
722 (1936)	Own 15A	6-4 1/16x5¼	40 Max.	TC	TC	.032	.020	.025	AC	E	⅞	T	.018	TC	TC	....
700, 700K (1937)	Own 21A	6-3 7/16x4½	40 Max.	10°B	3½B	.010	.010	.012	AC	K	14mm	.025	.018	7°B	4B	....
712NS, 718NS, 812, 818 (1937)	Own 16A	6-3 7/16x4½	40 Max.	7°B	3½B	.010	.012	.020	AC	K	14mm	T	P	12°B	4B	....
820, 720	Own 18A	6-4⅜x5¼	40 Max.	TC	TC	.....	.020	.025	AC	E6	14mm	P	.018	TC	TC	....
750, 750T, 850	Own 20A	6-3 7/16x5⅛	35 Max.	15°B	.....	.....	0	0	Ch	J10	14mm	T	D	7°B	.....	....
722, 822	Own 25A	6-4⅝x5¼	40 Max.	TC	TC	.....	.020	.025	AC	44	14mm	T	D	TC	TC	....
708, 710, 718, 810, 818	Own 30A	6-3 7/16x4½	35 Max.	15°B	.....	.....	0	0	Ch	J10	14mm	T	D	1-½°	.....	....
706, 706M, 708, 710, 718, 810, 818 (1940)	Own 30A	6-3 7/16x4½	35 Max.	15°B	.....	.....	0	0	Ch	J10	14mm	T	D	1-½°	.....	....
White Horse (1940)	Own 32A	4-3⅝x3⅜	40 Max.	.....	.....	.....	0	0	Ch	J5	14mm	.031	.020	12°B	.....	....
804, 810 (1940)	Own 29A	6-3⅝x4¼	25 Max.	RR	.....	.010	.006	.006	Ch	J8	14mm	.030	.020	TC	TC	....
WA14, WA114	Own 100A	6-3 1/16x4½	35 Max.	15°B	.....	0	0	0	Ch	JC10	14mm	T	.021	7°B	.....	....
WA18, WA118	Own 110A	6-3 1/16x4½	35 Max.	15°B	.....	0	0	0	Ch	JC10	14mm	T	.018	7°B	.....	....
WA20, W120, WA2064	Own 120A	6-3 1/16x4½	35 Max.	15°B	.....	0	0	0	Ch	JC10	14mm	T	.018	7°B	.....	....
WA22, WA26, WA34, WA122, WA126, WA134, WA2264	Own 140A	6-3 7/16x5⅛	35 Max.	15°B	.....	0	0	0	Ch	JC10	14mm	T	.018	7°B	.....	....
White Horse (1941)	Own 35A	4-3⅝x3½	40-2000	.....	.....	.....	0	0	Ch	J8	14mm	.030	.020	11¼°B	.....	....
WILLYS																
38, 48, 440P	Own	4-3 1/16x4⅜	30-30	TC	TC	.010	.004	.006	Ch	C7	18mm	.025	.020	5°A	1½A	87
440	Own	4-3 1/16x4⅜	75-30	9°B	2½B	.020	.014	.014	Ch	J8	18mm	.030	.020	TC	TC	107
441, 441P	Own	4-3 1/16x4⅜	75-30	9°B	2½B	.020	.014	.014	Ch	J9	18mm	.030	.020	TC	TC	107
442, 442P	Own	4-3 1/16x4⅜	75-30	9°B	2½B	.020	.014	.014	Ch	J9	18mm	.030	.020	TC	TC	111
CJ-2A (Universal Jeep)	Own	4-3 1/16x4⅜	40-50-30	9°B	2½B	.020	.014	.014	AL	AN-7B	14mm	.030	.020	TC	1.3B	111

ENGINES

BUDA																
.....	HP205	4-3 11/16x4½	40-1400	TC	TC	.006	.006	.009	Ch	15A	18mm	.030	.018	.....	.....	87
.....	HP217	4-3 1/16x4¾	40-1400	TC	TC	.006	.006	.009	Ch	15A	18mm	.030	.018	.....	.....	94
.....	HP234	4-4 1/16x5⅛	40-1400	TC	TC	.006	.006	.009	Ch	15A	18mm	.030	.018	.....	.....	110
.....	HP260	6-3½x4½	40-1400	TC	TC	.006	.006	.009	Ch	15A	18mm	.030	.018	.....	.....	87
.....	HP298	6-3¾x4½	40-1400	TC	TC	.006	.006	.009	Ch	15A	18mm	.030	.018	.....	.....	87
.....	HP326	6-3 11/16x4¾	40-1400	TC	TC	.006	.006	.009	Ch	15A	18mm	.030	.018	.....	.....	103
.....	HP351	6-3 11/16x5⅛	40-1400	TC	TC	.006	.006	.009	Ch	15A	18mm	.030	.018	.....	.....	103
.....	K369	6-4 1/16x4¾	40-1400	TC	TC	.006	.006	.009	Ch	15A	18mm	.025	.018	.....	.....	87
.....	K393	6-4 7/16x4¾	40-1400	TC	TC	.006	.006	.009	Ch	15A	18mm	.025	.018	.....	.....	89
.....	K428	6-4⅝x4¾	40-1400	TC	TC	.006	.006	.009	Ch	15A	18mm	.025	.018	.....	.....	102
.....	L525	6-4½x5½	40-1600	TC	TC	.006	.006	.009	Ch	15A	18mm	.025	.018	.....	.....	87
.....	LO525	6-4½x5½	40-1600	10°B	.....	.009	.009	.018	Ch	J10	18mm	.025	.018	.....	.....	93
.....	GF638	6-4¾x6	35-1400	5°B	.....	.010	.010	.016	Ch	J9	18mm	.025	.018	.....	.....	87
.....	M766	6-5x6½	35-1200	10°B	.....	.015	.010	.016	Ch	J10	18mm	.025	.018	.....	.....	93
.....	6MO893	6-5⅝x6	30-1200	10°B	.....	.010	.015	.015	Ch	J10	18mm	.027	.018	.....	.....	105
.....	4B-153	4-3 1/16x4⅛	35-1600	10°B	.....	.008	.009	.009	Ch	.....	14mm	.030	.018	.....	.....	....
.....	4B-182	4-3¾x4⅛	35-1600	10°B	.....	.008	.009	.009	Ch	.....	14mm	.030	.018	.....	.....	....

TURN TO NEXT PAGE, PLEASE

ENGINE TUNE-UP

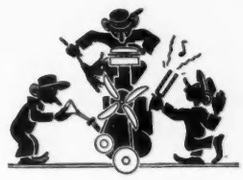
Specifications

(Continued from Page 61)

*—Severe Service .018
**—If optional engine model is used, see specification under engine manufacturer's listing.
■—Minimum
†—46 for AF240, AFP240, CCV100
††—Commercial 8AB, 18mm. plugs for 1941 models; J9, 14mm. for 1942 models
‡—Heavy duty plug; for light duty use H-10
1)—Timing is for H models, Spark of G models variable

TRUCK MAKE AND MODEL	Standard Engine Make and Model **	Number of Cylinders, Bore and Stroke	Normal Oil Pressure Lb. at M.P.H. or R.P.M.	Intake Valve Opens B-Before A-After		Intake Tappet Clearance for Valve Timing	OPERATING TAPPET CLEARANCE (Hot unless noted)		SPARK PLUG				Breaker Point Gap	Spark Occurs °TC B-Before A-After	Spark Occurs Fly-Wheel Teeth °TC B-Before A-After	Comp. Pressure at Cranking Speed
				°TC	Flywheel Teeth TC		Intake	Exhaust	Make	Type	Size	Gap				
BUDA—Continued																
	6B-230	6–3 7/8x4 1/2	35–1600	10°	.....	.008	.009	.009	Ch	.....	14mm	.030	.018	.....	.....	....
	6B-273	6–3 3/4x4 1/2	35–1600	10°	.....	.008	.009	.009	Ch	.....	14mm	.030	.018	.....	.....	....
	4MO-645	4–5 5/8x6 1/2	30–1200	10°	.....	.010	.015	.015	Ch	.....	18mm	.027	.018	.....	.....	105
	4DT212	4–3 5/8x5 1/2	40–1600	20°B	.....	.009	.009	.012	.....	Die sel	.....	.....	.....	.....	.....	390
	4DT226	4–3 3/4x5 1/2	40–1600	TC	TC	.009	.009	.012	.....	Die sel	.....	.....	.....	.....	.....	390
	6DT278	6–3 5/8x4 1/2	40–1600	20°B	.....	.009	.009	.012	.....	Die sel	.....	.....	.....	.....	.....	....
	6DT294	6–3 5/8x4 3/4	40–1600	20°B	.....	.009	.009	.012	.....	Die sel	.....	.....	.....	.....	.....	....
	6DT317	6–3 5/8x5 1/2	40–1600	12°B	.....	.009	.009	.012	.....	Die sel	.....	.....	.....	.....	.....	....
	6DT389	6–3 7/8x5 1/2	35–1600	12°B	.....	.009	.009	.012	.....	Die sel	.....	.....	.....	.....	.....	....
	6DT468	6–4 1/4x5 1/2	35–1600	12°B	.....	.009	.009	.012	.....	Die sel	.....	.....	.....	.....	.....	....
	6DH691	6–4 3/4x6 1/2	35–1600	15°B	.....	.015	.009	.012	.....	Die sel	.....	.....	.....	.....	.....	....
	6DC844	6–5 1/4x6	30–1200	20°B	.....	.010	.015	.015	.....	Die sel	.....	.....	.....	.....	.....	390
	8DC-1125	8–5 1/4x6 1/2	30–1200	20°B	.....	.010	.015	.015	Die sel	.....	.....	.....	.....	.....	.....	390
	4BD-153	4–3 7/8x4 1/2	35–1600	20°	.....	.008	.009	.009	Die sel	.....	.....	.....	.....	.....	.....	....
	6BD-230	6–3 7/8x4 1/2	35–1600	20°	.....	.008	.009	.009	Die sel	.....	.....	.....	.....	.....	.....	....
	4DC-645	4–5 5/8x6 1/2	30–1200	20°	.....	.010	.015	.015	Die sel	.....	.....	.....	.....	.....	.....	....
	6DCS-844	6–5 1/4x6 1/2	30–1200	45°	.....	.010	.015	.015	Die sel	.....	.....	.....	.....	.....	.....	....
	8DCS-1125	8–5 1/4x6 1/2	30–1200	45°	.....	.010	.015	.015	Die sel	.....	.....	.....	.....	.....	.....	....
CONTINENTAL																
	C400	4–3 3/8x4	35 Max.	.....	.....	.012	.010C	.010C	.....	.....	18mm	.....	.....	.....	.....	82
	F6170	6–3x4	30–40	.....	.....	.014	.014C	.014C	.....	.....	18mm	.....	.....	.....	.....	126
	F6199	6–3 1/4x4	30–40	.....	.....	.014	.014C	.014C	.....	.....	18mm	.....	.....	.....	.....	126
	F6218	6–3 1/4x4 3/8	30–40	.....	.....	.014	.014C	.014C	.....	.....	18mm	.....	.....	.....	.....	122
	A6244	6–3 7/8x4 3/8	45–55	.....	.....	.014	.022C	.022C	.....	.....	18mm	.....	.....	.....	.....	125
	20C	6–3 3/8x4 5/8	35 Max.	.....	.....	.012	.008	.010	.....	.....	7/8	.....	.....	.....	.....	108
	E600	6–3 1/4x4 1/2	40–50	.....	.....	.018	.018C	.022C	.....	.....	18mm	.....	.....	.....	.....	100
	E601	6–3 7/8x4 1/2	40–50	.....	.....	.018	.018C	.022C	.....	.....	18mm	.....	.....	.....	.....	100
	E602	6–4 1/8x4 1/2	40–50	.....	.....	.018	.018C	.022C	.....	.....	18mm	.....	.....	.....	.....	100
	E603	6–4 1/4x4 1/2	40–50	.....	.....	.018	.018C	.022C	.....	.....	18mm	.....	.....	.....	.....	100
	20R	6–4 1/4x4 3/8	40–50	.....	.....	.014	.014C	.020C	.....	.....	18mm	.....	.....	.....	.....	100
	21R	6–4 3/8x4 3/4	40–50	.....	.....	.014	.014C	.020C	.....	.....	18mm	.....	.....	.....	.....	100
	22R	6–4 1/2x5 1/4	40–50	5°B	.....	.014	.014	.020	.....	.....	18mm	E	.....	.....	.....	100
	Y4069	4–2 1/2x3 1/2	30–40	TC	.....	.012	.012	.012	.....	.....	18mm	E	.....	.....	.....	102
	Y4091	4–2 7/8x3 1/2	30–40	TC	.....	.012	.012	.012	.....	.....	18mm	E	.....	.....	.....	109
	Y4112	4–3 1/8x3 1/2	30–40	TC	.....	.012	.012	.012	.....	.....	18mm	E	.....	.....	.....	122
	F4124	4–3x4 3/8	30–40	TC	.....	.014	.014	.014a	.....	.....	18mm	E	.....	.....	.....	118
	F4140	4–3 1/8x4 3/8	30–40	TC	.....	.014	.014	.014a	.....	.....	18mm	E	.....	.....	.....	120
	F4162	4–3 1/8x4 5/8	35–40	TC	.....	.014	.014	.014a	.....	.....	18mm	E	.....	.....	.....	121
	F6186	6–3x4 3/8	35–40	TC	.....		.014	.014a	.....	.....	18mm	E	.....	.....	.....	....
	F6209	6–3 1/8x4 5/8	35–40	TC	.....		.014	.014a	.....	.....	18mm	E	.....	.....	.....	....
	F6226	6–3 1/8x4 5/8	30–40	TC	.....	.014	.014	.014a	.....	.....	18mm	E	.....	.....	.....	123
	M6253	6–3 1/2x4 3/8	40–50	.....	.....	.0175	.017C	.022C	.....	.....	18mm	E	.....	.....	.....	106
	M6271	6–3 5/8x4 3/8	40–50	6 1/2°B	.....	.0175	.017	.020b	.....	.....	18mm	E	.....	.....	.....	106
	M6290	6–3 3/4x4 3/8	40–50	6 1/2°B	.....	.0175	.017	.020b	.....	.....	18mm	E	.....	.....	.....	107
	M6330	6–4x4 3/8	40–50	6 1/2°B	.....	.0175	.017	.020b	.....	.....	18mm	E	.....	.....	.....	108
	B6371	6–4 1/8x4 5/8	40–50	6 1/2°B	.....	.022	.017	.022d	.....	.....	18mm	E	.....	.....	.....	123
	B6405	6–4 1/8x4 5/8	40–50	6 1/2°B	.....	.022	.017	.022d	.....	.....	18mm	E	.....	.....	.....	124
	B6427	6–4 1/8x4 7/8	40–50	6 1/2°B	.....	.022	.018	.018	.....	.....	18mm	E	.....	.....	.....	124
	R6513	6–4 1/2x5 5/8	50–60	17°B	.....	.0245	.020	.020	.....	.....	18mm	E	.....	.....	.....	120
	R6572	6–4 3/4x5 5/8	50–60	17°B	.....	.0245	.020	.020	.....	.....	18mm	E	.....	.....	.....	120
	R6602	6–4 7/8x5 5/8	50–60	17°B	.....	.0245	.020	.020	.....	.....	18mm	E	.....	.....	.....	120
CUMMINS																
	H	4–4 7/8x6	(F)–1800	5°B	.....	.....	.014	.022	.....	Die sel	.....	.....	.....	.....	.....	525
	H	6–4 7/8x6	(F)–1800	5°B	.....	.....	.014	.022	.....	Die sel	.....	.....	.....	.....	.....	525
	A	6–4x5	.....	.....	.....	.....	.015H	.025H	.....	Die sel	.....	.....	.....	.....	.....	....
	HS	6–4 7/8x6	F-1800	77°B	.....	.....	.016	.028	Die sel	.....	.....	.....	.....	.....	.....	525
	NH	6–5 1/8x6	F-O	20°B	.....	.....	.009	.027	Die sel	.....	.....	.....	.....	.....	.....	525
	NHS	6–5 1/8x6	F-O	77°B	.....	.....	.009	.027	Die sel	.....	.....	.....	.....	.....	.....	625
HERCULES																
	ZXA	4–2 1/2x3	15–1000	5°A	Var	.006	.006	.006	.....	.....	14mm	.025	.020	N	N	Opt
	ZXB	4–2 5/8x3	15–1000	5°A	Var	.006	.006	.006	.....	.....	14mm	.025	.020	N	N	Opt
	IX	4–2 1/2x4	15–1000	5°A	Var	.006	.006	.008	.....	.....	18mm	.025	.020	N	N	Opt
	IXF	4–2 3/4x4	15–1000	5°A	Var	.006	.006	.008	.....	.....	7/8	.025	.020	N	N	Opt
	IXA	4–3x4	15–1000	5°A	Var	.006	.006	.008	.....	.....	7/8	.025	.020	N	N	Opt
	IXK	4–3 1/8x4	15–1000	5°A	Var	.006	.006	.008	.....	.....	7/8	.025	.020	N	N	Opt
	IXB	4–3 1/4x4	15–1000	5°A	Var	.006	.006	.008	.....	.....	7/8	.025	.020	N	N	Opt
	OOA	4–3 1/8x4 1/2	15–1000	5°A	Var	.006	.008	.012	.....	.....	7/8	.025	.020	N	N	Opt
	OOB	4–3 3/4x4 1/2	15–1000	5°A	Var	.006	.008	.012	.....	.....	7/8	.025	.020	N	N	Opt
	OOC	4–4x4 1/2	15–1000	5°A	Var	.006	.008	.012	.....	.....	7/8	.025	.020	N	N	Opt
	OXA	6–3 1/8x4 1/2	26–1600	5°B	Var	.006	.006	.008	.....	.....	7/8	.025	.020	N	N	Opt
	OXB	6–3 1/4x4 1/2	26–1600	5°B	Var	.006	.006	.008	.....	.....	7/8	.025	.020	N	N	Opt
	OXC	6–3 3/8x4 1/2	26–1600	5°B	Var	.006	.006	.008	.....	.....	7/8	.025	.020	N	N	Opt
	OXD	6–3 7/8x4 1/2	26–1600	5°B	Var	.006	.006	.008	.....	.....	7/8	.025	.020	N	N	Opt
	JXA	6–3 3/8x4 1/4	26–1600	5°A	Var	.010	.008	.010	.....	.....	7/8	.025	.020	N	N	Opt
	JXF	6–3 1/2x4 1/4	26–1600	5°A	Var	.010	.008	.010	.....	.....	7/8	.025	.020	N	N	Opt
	JXG	6–3 1/2x4 1/4	26–1600	5°A	Var	.010	.008	.010	.....	.....	7/8	.025	.020	N	N	Opt
	JXE3	6–3 1/2x4 1/4	26–1600	5°A	Var	.010	.008	.010	.....	.....	7/8	.025	.020	N	N	Opt
	JXB	6–3 5/8x4 1/4	26–1600	5°A	Var	.010	.008	.010	.....	.....	7/8	.025	.020	N	N	Opt
	JXC	6–3 3/4x4 1/4	26–1600	5°A	Var	.010	.008	.010	.....	.....	7/8	.025	.020	N	N	Opt
	JXD	6–4x4 1/4	26–1600	5°A	Var	.010	.008	.010	.....	.....	7/8	.025	.020	N	N	Opt
	WXC	6–4x4 1/2	26–1600	2°A	Var	.010	.006	.010	.....	.....	7/8	.025	.020	N	N	Opt
	WXC2	6–4 1/8x4 1/2	26–1600	2°A	Var	.010	.006	.010	.....	.....	7/8	.025	.020	N	N	Opt

A—.019-.023
a—With Roto Valve, .010
AC—AC
AL—Auto-Lite
b—With Roto Valve, .016
Bud—Buda
C—Cold
C/A—Champion or Auto-Lite
Cat—Caterpillar
Ch—Champion
Con—Continenta
Cum—Cummins
D—.018-.024
d—With Roto Valve, .018
E—.018-.020
EE—.016-.018
F—30 to 40
H—.015-.025
HH—.013-.015C
Her—Hercules
K—.020-.025
KK—.010-.012C
Lyc—Lycoming
M—5°B for CC450, 3°B for CF450
N—Varies with compression ratio
O—1800-2100
Opt—Optional
P—.018-.023
R—.028-.032
RR—1° 52½' A
S—.023-.028
T—.025-.028
TC—Top Center
V—.012-.014
Var—Variable
Wau—Waukesha
Y—.011-.012C
YY—.014-.016
Z—.018-.022
ZZ—.025-.030



TRUCK MAKE AND MODEL	Standard Engine Make and Model **	Number of Cylinders, Bore and Stroke	Normal Oil Pressure Lb. at M.P.H. or R.P.M.	Intake Valve Opens B-Before A-After		Intake Tappet Clearance for Valve Timing	OPERATING TAPPET CLEARANCE (Hot unless noted)		SPARK PLUG				Breaker Point Gap	Spark Occurs °TC B-Before A-After	Spark Occurs Fly-Wheel Teeth °TC B-Before A-After	Comp. Pressure at Cranking Speed
				°TC	Flywheel Teeth TC		Intake	Exhaust	Make	Type	Size	Gap				
HERCULES—Continued																
.....	WXC3	6-4¼x4½	26-1600	2°A	Var	.010	.008	.010	.....	.....	⅞	.025	.020	N	N	Opt
.....	WXLC	6-4x4¾	26-1600	2°A	Var	.010	.006	.010	.....	.....	⅞	.025	.020	N	N	Opt
.....	WXLC3	6-4¼x4¾	26-1600	2°A	Var	.010	.006	.010	.....	.....	⅞	.025	.020	N	N	Opt
.....	YXC	6-4x4¾	26-1600	2°A	Var	.010	.010	.016	.....	.....	⅞	.025	.020	N	N	Opt
.....	YXC2	6-4¼x4¾	26-1600	2°A	Var	.010	.010	.016	.....	.....	⅞	.025	.020	N	N	Opt
.....	YXC3	6-4⅝x4¾	26-1600	2°A	Var	.010	.010	.016	.....	.....	⅞	.025	.020	N	N	Opt
.....	RXB	6-4¼x5¼	26-1600	2°A	Var	.010	.010	.016	.....	.....	⅞	.025	.020	N	N	Opt
.....	RXC	6-4⅝x5¼	36-1600	2°A	Var	.010	.010	.016	.....	.....	⅞	.025	.020	N	N	Opt
.....	RXLC	6-4⅝x5¼	36-1600	2°A	Var	.010	.010	.016	.....	.....	⅞	.025	.020	N	N	Opt
.....	RXLD	6-4¾x5¼	36-1600	2°A	Var	.010	.010	.016	.....	.....	⅞	.025	.020	N	N	Opt
.....	HXB	6-5x6	35-1600	5°B	Var	.015	.010	.016	.....	.....	⅞	.025	.020	N	N	Opt
.....	HXC	6-5¼x6	35-1600	5°B	Var	.015	.010	.016	.....	.....	⅞	.025	.020	N	N	Opt
.....	HXD	6-5½x6	35-1600	5°B	Var	.015	.010	.016	.....	.....	⅞	.025	.020	N	N	Opt
.....	HXE	6-5¾x6	35-1600	5°B	Var	.015	.010	.016	.....	.....	⅞	.025	.020	N	N	Opt
.....	DOOB	4-3¾x4½	30-1200	12°B	Var	.010	.010	.010	.....	Diesel	.....	.....	.....	.....	.....	500
.....	DOOC	4 4x4½	30-1200	12°B	Var	.010	.010	.010	.....	Diesel	.....	.....	.....	.....	.....	500
.....	DOOD	4-4¼x4½	30-1200	12°B	Var	.010	.010	.010	.....	Diesel	.....	.....	.....	.....	.....	500
.....	DJXB	6-3¼x4½	45-2000	12°B	Var	.010	.010	.010	.....	Diesel	.....	.....	.....	.....	.....	475
.....	DJXC	6-3¾x4½	45-2000	12°B	Var	.010	.010	.010	.....	Diesel	.....	.....	.....	.....	.....	475
.....	DRXB	6-4⅜x5¼	30-1200	12°B	Var	.016	.016	.016	.....	Diesel	.....	.....	.....	.....	.....	475
.....	DRXC	6 4⅝x5¼	30-1200	12°B	Var	.016	.016	.016	.....	Diesel	.....	.....	.....	.....	.....	475
.....	DHXB	6-5x6	30-1200	5°B	Var	.015	.010	.016	.....	Diesel	.....	.....	.....	.....	.....	475
.....	DFXB	6-5x6	50-1200	5°B	Var	.015	.010	.016	.....	Diesel	.....	.....	.....	.....	.....	475
.....	DHXC	6-5½x6	30-1200	5°B	Var	.015	.010	.016	.....	Diesel	.....	.....	.....	.....	.....	475
.....	DFXC	6-5¼x6	50-1200	5°B	Var	.015	.010	.016	.....	Diesel	.....	.....	.....	.....	.....	475
.....	DFXD	6-5½x6	50-1200	5°B	Var	.015	.010	.016	.....	Diesel	.....	.....	.....	.....	.....	475
.....	DFXE	6-5⅝x6	50-1200	5°B	Var	.015	.010	.016	.....	Diesel	.....	.....	.....	.....	.....	475
WAUKESHA																
.....	6BK	6-3¾x4½	40-1500	5°A	1½A	.010	.010-12C	.014-16C	Opt	.....	18mm	.025	.018	Var	.....	112
.....	6MS	6-3¾x4¾	40 1500	8°A	.....	.004	.008-12C	.012-14C	Opt	.....	18mm	.025	.018	Var	.....	86
.....	6ML	6-4x4¾	40-1500	8°A	3A	.004	.008-10C	.014-16C	Opt	.....	18mm	.025	.018	Var	.....	89
.....	6MK	6-4¼x4¾	40-1500	8°A	3A	.004	.008-10C	.014-16C	Opt	.....	18mm	.025	.018	Var	.....	80
.....	6MZ	6-4¼x4¾	40-1500	8°A	3A	.004	.008-10C	.014-16C	Opt	.....	18mm	.025	.018	Var	.....	90
.....	6SRL	6-4⅜x5¼	40-1500	10°A	3A	.004	.008-10C	.016-18C	Opt	.....	⅞	.025	.018	Var	.....	90
.....	6SRK	6-4⅝x5¼	40-1500	10°A	3A	.004	.008-10C	.016-18C	Opt	.....	⅞	.025	.019	Var	.....	90
.....	6AB	6-4½x5¾	40-1500	10°A	.....	.008	.004-06C	.008-10C	Opt	.....	⅞	.025	.018	Var	.....	76
.....	6RB	6-5x5¾	40-1500	10°A	4A	.008	.006-08C	.010-12C	Opt	.....	⅞	.025	.018	Var	.....	90
.....	6BL	6-3½x4¼	40-1500	5°A	1½A	.010	.010-12C	.014-16C	Opt	.....	18mm	.025	.018	Var	.....	112
.....	6-90	6-3¾x4¾	40-1500	5°B	.....	.010	.010-12C	.014-16C	Opt	.....	18mm	.025	.018	Var	.....	98
.....	6-110	6-4x4¾	40-1500	15°B	5B	.009	.010-12C	.014-16C	Opt	.....	18mm	.025	.018	Var	.....	97
.....	6-125	6-4⅜x5¼	40-1500	42°B	15B	.008	.010-12C	.018-20C	Opt	.....	18mm	.025	.018	Var	.....	98
.....	6SRS	6-4¼x5¼	40-1500	10°A	.....	.004	.008-10C	.016-18C	Opt	.....	⅞	.025	.018	Var	.....	80
.....	6BA	6-3¾x4¼	40-1500	TC	TC	.010	.010-12C	.012-14C	Opt	.....	18mm	.025	.018	Var	.....	112
.....	6BM	6-3¾x4¼	40-1500	5°A	1½A	.010	.010-12C	.014-16C	Opt	.....	18mm	.025	.018	Var	.....	112
.....	6ZKA	6-3¾x4⅛	40-1500	8°A	2A	.004	.008-10C	.012-14C	Opt	.....	18mm	.025	.018	Var	.....	111
.....	6GAL	6-5x5½	40 1500	TC	TC	.008	.015-17C	.024-26C	Opt	.....	18mm	.025	.018	Var	.....	112
.....	6GAK	6-5½x5½	40-1500	TC	TC	.008	.015-17C	.024-26C	Opt	.....	18mm	.025	.018	Var	.....	112
.....	6BKH	6-3¾x4¼	40-1500	5°A	2A	.006	.010-12C	.018-20C	Opt	.....	18mm	.025	.018	12°B	.....	135
.....	6BZ	6-4x4¼	40 1500	5°A	1½A	.010	.010-12C	.014-16C	Opt	.....	18mm	.025	.010	Var	.....	112
.....	6WAL	6-5¾x6½	40-1500	TC	TC	.012	.018-20C	.025-27C	Opt	.....	18mm	.025	.018	Var	.....	85
.....	6WAK	6-6¼x6½	40-1500	TC	TC	.012	.018-20C	.025-27C	Opt	.....	18mm	.025	.018	Var	.....	85
.....	6WALH	6-5¾x6½	40-1500	TC	TC	.012	.018-20C	.025-27C	Opt	.....	18mm	.025	.018	17°B	.....	125
.....	6WAKH	6-6¼x6½	40-1500	TC	TC	.012	.018-20C	.025-27C	Opt	.....	18mm	.025	.018	17°B	.....	125
.....	6MKR	6-4¼x4¾	40-1500	8°A	3A	.004	.008-10C	.014-16C	Opt	.....	18mm	.025	.018	Var	.....	80
.....	6MZR	6-4¼x4¾	40-1500	8°A	3A	.004	.008-10C	.014-16C	Opt	.....	18mm	.025	.018	Var	.....	90
.....	6SRLR	6-4⅜x5¼	40-1500	8°A	3A	.004	.008-10C	.014-16C	Opt	.....	⅞	.025	.018	Var	.....	90
.....	6SRKR	6-4⅝x5¼	40-1500	8°A	3A	.004	.008-10C	.014-16C	Opt	.....	⅞	.025	.018	Var	.....	90
.....	6RBR	6-5x5¾	40-1500	10°A	4A	.008	.006-08C	.010-12C	Opt	.....	18mm	.025	.018	Var	.....	90
.....	130HS, 130GS	4-3¾x5	30-1500	10°A	3A	.012	.009-11C	.014-16C	Opt	.....	18mm	.025	.018	16°B(1	.....	130
.....	130HL, 130GL	4-4x5	30 1500	10°A	3A	.012	.009-11C	.014-16C	Opt	.....	18mm	.025	.018	16°B(1	.....	130
.....	140HS, 140GS	6-4¼x5½	40 1500	5°A	1¼A	.010	.010-12C	.016-18C	Opt	.....	18mm	.025	.018	16°B(1	.....	130
.....	140HK,140GK	6-4½x5½	40-1500	5°A	1¼A	.010	.010-12C	.016-18C	Opt	.....	18mm	.025	.018	16°B(1	.....	130
.....	145HS, 145GS	6-4¾x6	40-1500	5°A	2A	.008	.009-11C	.024-26C	Opt	.....	18mm	.025	.018	16°B(1	.....	130
.....	145HK,145GK	6-5¼x6	40 1500	5°A	2A	.008	.009-11C	.024-26C	Opt	.....	18mm	.025	.018	16°B(1	.....	130
.....	145GZ	6-5½x6	50-1500	5°A	2A	.008	.009-11C	.024-26C	Opt	.....	18mm	.025	.018	Va r	.....	130

CIVILIAN TRAILER PRODUCTION*

	General Freight	Low-Bed Heavy Haulers	Pole, Pipe and Logging	Dumps, All Types	Tanks, All Types	Off-Highway	Miscellaneous	Total Civilian
1939	18,144	850	2,891	806	1,491	.....	.....	24,182
1940	19,693	1,023	3,728	728	1,946	.....	.....	27,118
1941	30,837	1,205	5,837	1,392	2,598	.....	.....	41,869
1942‡	.....	.....	.....	.....	.....	.....	.....	8,408
1943‡	.....	.....	.....	.....	.....	.....	.....	8,054
1944	19,822	256	2,100	.....	1,248	311	355	24,092
1945†	28,627	868	3,087	.....	1,573	370	462	32,987

*—Does not include those trailers with a rated tonnage capacity under 5 tons.
†—Estimated by Commercial Car Journal. ‡—No breakdown by type available for 1942 and 1943.
Source—Bureau of Census and War Production Board.

FRONT-END ALIGNMENT

Specifications

Front-end alignment should be checked frequently because misalignment is one of those mechanical faults that, normally, just creeps up on a vehicle — unless caused by an accident. It isn't until miles are worn off tires or steering gets to be a struggle that the shop gets complaints from the driver. By then much damage has been done.

Front-end inspections should go on the PM check list so that the presence of misalignment can be detected early and not when steering control parts have been excessively worn or tire life slashed by undue, improper wear. Following are the checks recommended by automotive engineers, maintenance experts and tire manufacturers.

INCORRECT TOE-IN—Tire wears from outside to inside of tread, leaving a feather edge on inside edges of ribs. It usually is more pronounced on the right wheel.

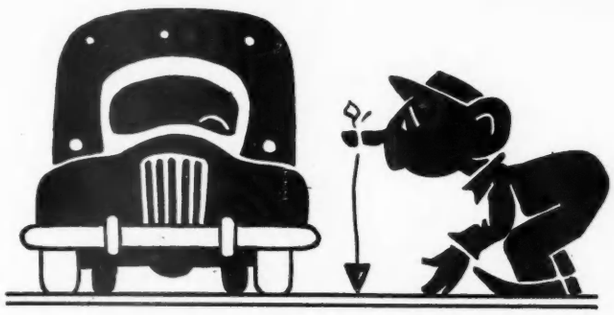
INCORRECT TOE-OUT—Tire wears from inside of tread to outside edges of ribs. Most wear will appear on inside half of tread. It usually is more pronounced on the left wheel.

INCORRECT CAMBER—Wear on the outside half of tread with excessive camber and on inside half with insufficient camber. Wear takes the form of deep depressions or waves often called "heel and toe" wear.

INCORRECT KING PIN INCLINATION — Worn king pin

TRUCK MAKES AND MODELS	TOE-IN (In inches unless otherwise shown)	CAMBER (In degrees)	CASTER (In degrees)	KING PIN SLANT (In degrees)
AUTOCAR				
RG, RH, RHT, 6RH, UT, UNF, UTT, UNFT (1935-39)	0–1/4	1	2½	8
D, 6T, 6D, UDT, 6UDF, RHD (1935-36)	0–1/4	1	1¾	8
DF, DFT, 6DF, DH, S (1935-36)	0–1/4	1	1	8
N (1935-36)	0–1/4	1	½	8
NT, DP (1935-36)	0–1/4	1	1½	8
NF, 6N (1935-36)	0–1/4	1	¼	8
NFT (1935-36)	0–1/4	1	¾	8
T, 6T, UDFT, UNT, 6NF (1935); 6NF (1936)	0–1/4	1	1½	8
TT, UDP (1935); T, 6T, UDFT, UNT, TT, UDF (1936)	0–1/4	1	2	8
UDF (1935-36)	0–1/4	1	1¾–2¼	8
UN (1935-36)	0–1/4	1	3¼	8
UNFT, 6UN (1935-36)	0–1/4	1	2¾	8
6UT (1935-36)	0–1/4	1	¼N	8
C (1935-36)	0–1/4	1	0	8
UD, 6UD, US, UNF (1935)	0–1/4	1	2¼	8
TF, 6TF (1936)	0–1/4	1	½N	8
TFT (1936)	0–1/4	1	¾–1N	8
6X2RL (1937)	0–1/4	1	2½	8
RM, RL, RLD (1937); A, 6X2RL (1938)	0–1/4	1	2¼–2½	8
D, 2TR, 3TR, 4TR, 6X2DF (1937); D, 3TR (1938)	0–1/4	1	2 –2¼	8
RMT, 1TR (1937); 1UTR, 2UTR, 3UTR (1937-38); 4TR, RLD, 6X4DF (1938)	0–1/4	1	2	8
DF, DP (1937-38)	0–1/4	1	1¾–2	8
UD (1937); RMT, 1TR, UD, 6X2UD (1938)	0–1/4	1	1½–2	8
5TR (1937)	0–1/4	1	1¼–2	8
6X2UD (1937); 4UTR (1937-38); DH (1938)	0–1/4	1	1½–1¾	8
N (1937-38)	0–1/4	1	1¼–1¾	8
DH (1937); NF, 5UTR (1937-38)	0–1/4	1	1¼–1½	8
T (1937)	0–1/4	1	½–1	8
6X2T (1937-38); 6X4TO (1938)	0–1/4	1	¾	8
6X2NF (1937)	0–1/4	1	½– ¾	8
CP (1937)	0–1/4	1	¼	8
S, 6X2UT (1937)	0–1/4	1	0 – ¼	8
6X2UNF (1937)	0–1/4	1	N¼– ¼	8
UNF, UDP, US (1937); C, 6X4TC (1938)	0–1/4	1	0	8
UN, UT (1937-38); UNF, UDP, 6X2UN, 6X2UNF, 6X2UT (1938)	0–1/4	1	N¼-0	8
UDF, 6X2UN (1937;) UDF, US, 6X4TD, 6X4UTO, 6X4UTD (1938)	0–1/4	1	N¼	8
B, RM, RL, 2TR (1938)	0–1/4	1	2 –2½	8
5TR, 6X2DF (1938)	0–1/4	1	1¾–2¼	8
UA (1938)	0–1/4	1	1½–2½	8
UB (1938)	0–1/4	1	1½–2¼	8
T, 6X2NF (1938)	0–1/4	1	¾–1¼	8
A, B, RL, RB (1939); C10 C20, C30, C40 (1940-42)	0–1/4	1	¼–1¾	8
RLS, DF, 6X4DF, URB, URL, URLS (1939)	0–1/4	1	N¼–1¼	8
N, NF, T, 4TR, 5TR, 6X2NF, 6X2T, UA, UB, 1UTR, 2UTR, 3UTR, 6X2UD (1939)	0–1/4	1	N½–1	8
D, RFT, 1TR, 2TR, 3TR, RLD, 6X2DF (1939); C10T, C20T, C30T, C40D, C4064, C60, C7062, C7064, C70, U4062 (1940-42)	0–1/4	1	0 –1½	8
AUTOCAR—Continued				
DP, DH, UD (1939); U60, C70D, U7064 (1940-42)	0–1/4	1	N¾–¾P	8
S, C (1939); C80D, C90D (1940-42)	0–1/4	1	N1½–0	8
6X2RL (1939); C4062 (1940-42)	0–1/4	1	½–2	8
6X4TO (1939)	0–1/4	1	N1–¼P	8
6X4TC (1939); C8064, C9064, DU100T (1940-42)	0–1/4	1	N1–½P	8
6X4TD, UDF, UN, UNF, 6X2UN, 6X2UNF (1939); U80D, U8062 (1940-42)	0–1/4	1	N1¼–¼N	8
UT, 4UTR, 5UTR, 6X2UT (1939); U90, U9062 (1940-42)	0–1/4	1	N1 –0	8
UDP, 6X4UTO (1939); U60D, U8064 (1940-42)	0–1/4	1	N1½–½N	8
US, 6X4UTD (1939); U70, U80, U80D, U8062, U90D, U9064 (1940-42)	0–1/4	1	N1¼–¼N	8
4X4N, 4X4S (1939)	0–1/8T	1	5 –7	8
U10, U20 (1940-42)	0–1/4	1	N½–1½P	8
U10T, U20T, U30T, U40T, U40D, U7062, C80, C8062, C90, C9062 (1940-42)	0–1/4	1	N½–1P	8
U30, U40 (1940-42)	0–1/4	1	N¼–1¼P	8
C60T, C70T, C80T, C90T (1940-42)	0–1/4	1	1 –2	8
C7044, C8044, C9044, DC10044 (1940-42)	1/8T	0	3 –6	0
DC100D, DC10064, DC10062, DU10062, DU10064 (1940-42)	0–1/4	1	N2½–N1½	8
C40T, C50D, C50T (1940-42)	0–1/4	1	0–1½	8
DC100T (1940-42)	0–1/4	1	½–1½	8
C50, U50 (1940-42)	0–1/4	1	N¼–1¼P	8
C6044 (1940-42)	1/8T	0	2½–6	0
DC100D, DC10062, DC10064 (1942)	0–1/4	1	N2½–1N	8
U60T, U70T, DC100T (1941-42)	0–1/4	1	½–1½	8
U80T (1941-42)	0–1/4	1	0 –1	8
C50 (1944-46)	0–1/4	1	N¼–1¼P	8
C70 (1944)	0–1/4	1	N½–1P	
C50T, C70T, C90T (1944-46); C70TS (1945-46)	0–1/4	1	1 2	8
C70, C70S, U50 (1945-46); C90 (1944-46)	0–1/4	1	N¾–¾P	8
DC100 (1945-46); DC10062, DC10064 (1944-46)	0–1/4	1	N2½–1N	8
DC10064S (1945-46)	0–1/4	1	N2½–½N	8
DC100T (1944-46)	0–1/4	1	½–1½	8
U70, U70S (1946)	0–1/4	1	N1¼–¼P	8
U90 (1945-46)	0–1/4	1	N1–0	8
C5064 (1946)	0–1/4	1	0–1½P	8
C90D (1946)	0–1/4	1	N1½–0	8
DC100D, DC100DN (1946)	0–1/4	1	N2½–½N	8
BROCKWAY				
80, 90 (1932-33)	1/16–1/8	2	1 –2	9
120, 140 (1930-33); 100, 150 (1933); 90X, 96, 110, 125X, 130, 145, 150X4, 150X5 (1935)	1/16–1/8	1	1 –2	7
141, 170, 195, 220 (1930-33); 160, 260 (1932-33); 160X, 165X, 190X (1935-41); 162, 166, 170X, 175X, 195X, 220X, 240X, 280X (1935-42)	1/16–1/8	2	1 –2	0
87, V1200 (1935-36); 125X, 130, 145, 150X4, 150X5, 96, 110 (1936-41); 78, 83, 88, 88W, 88WH, 92, 94, 112, 128, 148, 146W, 147, 152, 153, 154, 154W, 156 (1936-45)	1/16–1/8	1	1 –2	8
152W, 260XW (1944-45)	1/16–1/8	1	1 –2	0

N—Negative P—Positive T—Toe-out *— ± 1 degree



bushings will change the king pin slant which will cause wheel tramp or shimmy characteristic which result in spotty or irregular side-to-side wear.

For each of the conditions described, correct specifications are supplied in these columns. Data are compiled according to truck makes and models.

INCORRECT CASTER—Incorrect caster cannot be detected by any special tire wear characteristics, although it does affect tire life. However, incorrect caster, either negative or positive, may be suspected when steering is difficult (wheels persistently lead to one side or truck pulls to one side) or by erratic steering when brakes are applied.

TRUCK MAKES AND MODELS	TOE-IN (In inches unless otherwise shown)	CAMBER (In degrees)	CASTER (In degrees)	KING PIN SLANT (In degrees)
CHEVROLET				
½-Ton (1935-46); ¾-Ton (1937-42)	1/8–1/4	1½–1¾	1¼–2¼	7⅛*
1-Ton (1937-38)	1/8–1/4	1½–1¾	1¼–2¼	7⅛*
1-Ton (1939-42): 1½-Ton (1935-46)	1/8–1/4	1½–1¾	2¼–3¼	7⅛*
1½-Ton C.O.E. (1940-42)	1/8–1/4	1½–1¾	2½–3½	8*
2-Ton C.O.E. (1946)	1/8–1/4	1½–1¾	2½–3½	8*
2-Ton (1946)	1/8–1/4	1½–1¾	2¼–3¼	7⅛*
CORBITT				
All 2-wheel drive (1936-38)	1/8–1/4	1	1½–2¼	8
All 2-wheel drive (1939-44)	1/8–1/4	1	2 –3½	8
All front-wheel drive (1939-44)	1/8–1/4	0	5 –7	0
All 2-wheel drive (1945-46)	1/8–1/4	1	2 –3½	8
All front-wheel drive (1945-46)	1/8–1/4	0	5 –7	0
DIAMOND T				
210, 211, 226	1/8	1	1½	
241, 251	1/8	2	2½	
311, 326B, 325DR, 351, 376	1/8	2	2½	7½
410A	1/4	2	3	7½
425, 510, 525 603A, 801A, 740, 750	1/4	2	3	0
1515, 1201 1203, 1602A, 1603, 2501	1/4	2	4½	0
243, 311C, 312, 351C, 352 (1935)	1/8	2	2½	7½
412B, 412DR, 512B, 512DR (1935)	1/8	1	2½	7½
211A, 220, 227 (1935); 212A, 212B, 221, 228 (1936-37)	1/8	1	1½	9
244, 313, 320, 353, 360 (1936-37)	1/8	2	1½	
412B, 412DR, 512B, 512DR (1936-37)	1/8	1	2½	8
80 (1936-37)	1/8	1	3½	8
80, 301, 304 (1938); 201, 305, 306, 308SC (1939-42)	1/8	1	4⅔	9
404SC, 509SC, 612SC, 614SC, 404, 405, 406, 513, 615 (1938-45)	1/8	1	1½	9
509, 611, 612, 613, 614, 513, 401, 402, 507, 607, 609, 508, 610, 404C, 509C, 513C, 612C, 614C (1938-45)	1/8	1	1½	9
412DR, 512B, 512DR, 702, 805H, 805W, 805B, 806BW, 805DR, 805DRW, 806, 806H, 806W, 807W, 808W, 900, 900W (1938-45)	1/8	1	2½	8
802, 803, 804, 803C, 804C, 615C, 803C, 804C (1938-42)	1/8	1	1½	8
201C, 305C, 306C (1940-42)	1/8	1	1	9
DODGE				
KC, KCL (1935)	1/16	1	2	
KH31A, KH32A, KH33A, K32A, K33A, K34A (1935)	1/32–3/32	2	1½	
LE-30, LE-31, LE-32, FD3-29, FD3-36, FD3-62, LF-35, LF-36, LF-37, FD4-29, FD4-36, FD4-62, LF-38, LF-39, FDD4-62, FDD4-85 (1936)	1/32–3/32	2	1¼	7
K45A, K46A, K47A, K48A (1935)	1/32–3/32	2	1¾	7
LH-45, LH-46, LH-47, LH-48, FD6-36, FD6-51, FD6-12, FD6-60 (1936)	1/32–3/32	2	1¾	7
K52 Special (1935)	3/8	2	3½	9
K60A, K61A, K62A (1935); LM-70, LM-71, LK-60, LK-61, LK-62, LK-63 (1936); ML, MK (1937)	1/16–1/8	1	2	8

TRUCK MAKES AND MODELS	TOE-IN (In inches unless otherwise shown)	CAMBER (In degrees)	CASTER (In degrees)	KING PIN SLANT (In degrees)
DODGE—Continued				
RL, RK (1938); TL, TK, TLD, TKD (1939)	1/16–1/8	1	2	8
VL, VK, VLD, VKD, WL, WK, WLD, WKD (1940-42)	1/16–1/8	1	2	8
LC, FD1-16	1/8	1	2	8
MC, FE1-16, PT-50, MD, FE2 (1937); RC, RD (1938); TC, TD-15, TD-20, TD-21 (1939); VC, VD (1940); WC, WD (1941-46)	1/8	1¼	2	4
ME, FE3, MF, FE4 (1937); RE, RF (1938); TE, TF, TG, TH (1939); VF (1940); WF, WFA (1941-46)	1/16–1/8	2	1½	7
MG, MH, FE8 (1937); RG, RH (1938); VM, VG, VH (1940); WFM, WG, WH, WHA, WGM, WHM (1942-46)	1/16–1/4	2	2	7
MO, MP (1937); RO, RP (1939)	1/16–1/8	1	2½	8
FEDERAL				
X, X8 (1930-36)	1/4	1	2¾	0
A7, A8, 30, 36, 37, 40 (1931-35)	1/4	2	3	7½
15A, 15B, 15Y, 20A, 20B, 20C, 21, 22 (1933-34)	1/4	1	1¾	7½
25A, 25B (1933-34)	1/4	2	1¾	7½
C7, C7W, C8, C8W (1934-36)	1/4	1	2½	8
15D, 18D, 20D, 25D (1935)	1/4	1	1¾	7½
T10B, T10W (1937)	3/8	1	3	9½
X8, X8R (1937)	1/16	1	2¾	0
10E, 9, 9E, 11, 11E, 15D, 18D, 20D, 25D, 28D, 29D, 40E, 50E, 50H, C7, C8, C7W, C8W (1936-38)	1/16	1	3	8
11, 11K, 12, 12K, 14, 14K, 15, 15K, 18, 18K, 20, 20K, 25, 25K, 29, 29K, 35, 40F, 45, 50F, 55, 62, 63, 65, 66, 75, 75K, 80, 80K, 85, 85K, 89, 89K, 90, 92, 94	1/16	1	3	8
7, 8	1/4	1	3½	8
18M, 29M, 45M, 55M, 60M, 60MA (1944-45)	1/16	1	3	8
FORD				
A Commercial Car (1928-31)	3/32	2–¼	6½–3½	7
AA Truck (1928-31)	3/32	2–¼	5 –3	7
B (4 and 8 cyl.) Commercial Car (1932)	3/32	2–¼	9 –4½	7
BB (4abd and 8 cyl.) Truck (1932-34)	3/32	2–¼	5 –3	7
46 Commercial (1933-34); 50 Commercial (1935)	3/32	2–¼	9 –4½	8¼
51 Truck (1935-36)	0	¾–¼	5 –3	8¼
67 Commercial Car (1936)	1/16	¾–¼	9 –4½	8¼
73, 77 Commercial Car (1937)	1/16	1–¼	9 –4½	8¼–8
75, 79 Truck (1937)	0	¾–¼	5 –3	8½–8
81T, 817T (1938); 91T, 99T, 917T, 997T (1939) Trucks	0	¾	5	8¼
81Y, 82Y (1938); 91Y, 92Y (1939) 1-Ton	1/10	¾	8	8
81C, 82C (1938); 91C, 922C (1939) Commercial	1/16	1	8	8
911W, 991W, 91W, 99W, 917W (1939) (C.O.E.)	0	¾	1 –3½	8¼
O18T, O98T, O1T, O9T (1940 Reg.)	1/16	¾	3	8¼
O1W, O9W, O11W, O91W (1940 C.O.E.)	0	¾	1 –3½	8¼
P2D, O1D, O2Y, O1Y (1940 ¾-and 1-Ton)	1/16	¾	3	8
O22C, O1C (1940 Comm.)	1/16	¾	3	8
118T, 119T, 11T, 19T (1941 Reg.)	1/16	¾	3	8¼
11W, 19W, 111W, 191W (1941-42) (C.O.E.)	1/16	¾	4½	8¼
110, 11Y, 1NY (1941-42 ¾-and 1-Ton)	1/16	1	3	8
11C, 1NC (1941-42 Comm.)	1/16	1	5	8
494T, 498T (1944); 594T, 598T (1945)	1/16	¾	3	8¼
69C, 6GC (1946)	1/16	1	5	8
69D, 6GD, ¾ ton (1946)	1/16	¾	3	8
69Y, 6GY, 1-ton (1946)	1/16	1	3	8
69T, 6GT, 698T, 6G8T, 694T, 69U, 6GU, 691W, 69W, 698W, 69B, 1½-ton (1946)	1/16	¾	3	8¼
FWD				
HS, MJ6, M6, M10, MJ6X6, T-26, T-30, T-32, T-60, T-65	1/8	1½	2	4½
CU, CUA, SU, SUA, YU	1/8	1½	2	0
HA, HR, HG	1/8	1	2	8
M7, M6X6	1/8	1½	5	0
G.M.C. (GENERAL MOTORS TRUCK)				
CC-100	3/32–1/8	3	1½	7⅛
CC-150, CC-250	3/32–1/8	2¾	1½	7⅛
CC-260, CC-300	3/32–1/4	3	1½	7⅛
CC-350, CC-400, CC-450	3/32–1/4	1½	1	8
CF-300, CF-350, CF-400	3/32–1/4	1	1	8
CF-450	1/16–1/4	½	1	8
AC-100, AC-150, AC-300	3/32–1/8	2¾	1½	7⅛
AC-250	3/32–1/8	2½	1½	7⅛
AC-350	3/32–1/8	¾	1	8
AC-400	3/32–1/8	1	1	8
AC-450	3/32–1/8	½	1	8
AF-240	3/32–1/8	1¼	1½	7⅛
AF-300, AF-310, AF-350, AF-400	3/32–1/4	1	1	8
AF-360, AF-410, AF-450, AF-460	3/32–1/4	½	1	8
AC-500, AC-520, AC-550, AC-600, AC-620, AC-650	1/16–1/4	½	1	8
AC-700, AC-720, AC-750, AC-770, AC-800, AC-850, AC-870, AC-890	3/32–1/4	¾	1	8
AF-500, AF-520, AF-550, AF-600, AF-620, AF-650	1/16–1/4	½	1	8
AF-700, AF-720, AF-750, AF-800, AF-850	1/16–1/4	¾	1	8
ACR-520, ACR-620	1/16–1/4	½	1	8
ACR-720, ACR-750	1/16–1/4	¾	1	8
AFR-520	1/16–1/4	½	1	8
AFR-720	1/16–1/4	¾	1	8
HUDSON				
58	0–1/16	¼–¾	N¼–¼	4½
HUG				
23, 42, 23W, 42W, CB8P	1/16–1/8	2	1	7½
43, 70, 85W, 87, 87W, 98, 99, 99S, 15W, 19W, 83W	1/16–1/16	2	1	0
15, 19, CB6P, All wheel drives	1/16–1/16	2	1	8½
INTERNATIONAL				
C1, C5, C15	1/8	2	2	7½
M2, C10, C20, M3	1/8	1	2	8
A1, A2, B2, A4, C50, A5, A6, C55, C60	1/8	1	2½	8
B3, C30, B4	1/8	1	1	8
C35, CS35, C40	1/8	1	1¼	8

N—Negative P—Positive T—Toe-out *— = 1 degree

(TURN TO NEXT PAGE, PLEASE)

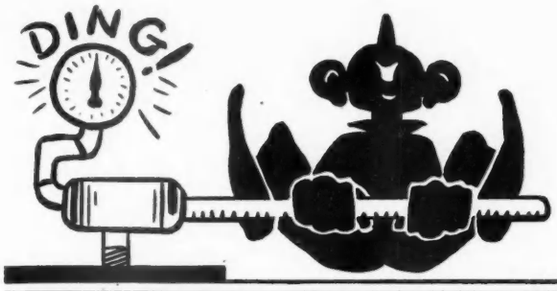
Front-End Alignment . . .

(Continued from Page 65)

TRUCK MAKES AND MODELS	TOE-IN (In inches unless otherwise shown)	CAMBER (In degrees)	CASTER (In degrees)	KING PIN SLANT (In degrees)
INTERNATIONAL—Continued				
W1, W2	1/32	1	0	8
A7, A8	1/32	1	1/2	8
D2, D5, D15, D2M	1/8–1/4	2	1 -2	7½
D30, DS30, D30B, DS30B, D15M, D35, DS35, D35B, DS535B, D40, DS40, D40B, D186T, DS186T, D216T, DS216T, D300, DS300	1/16–1/4	1	2 -3	8
D50, DR50, DS50, D60, DR60, DR70, D246T, DR246T, DS246T, D246F, DR346T, D346F, DR426F, D500, DR500, DS500, DR700	1/16–1/8	1	½-2	8
AR626F	1/16–1/8	2	0-1	8
K1, K2, K3	1/16–1/8	1	2-3	7½
K4, KS4, K5, KS5	1/16–1/8		2-3	8
K5-COE, KS5-COE, K6, KS6, K6-T, KS6-T, K6-F, K7, KR7, KS7	1/16–1/8	1	2-3	4
K7-COE, KS-7-COE	1/16–1/8		1½-1¾	4
K8, KS-8, KR8, K8-T, KS8-T, KR8-T, K8-F, K8-COE, KS8-COE, KR8-COE, K10, KR10, KS10, KR11, KS11, KR11-T, KS11-T, K11-F, KR11-COE, KR11F-COE, KS11-COE, KR12-F	1/16–1/8	1	1½-1¾	4
KENWORTH				
513, 514, F209 (1936-37)	1/8–1/4	0	5	0
513, 514, (1938); 539, 540, 541, 542 (1938-42); 552 (1941-42)	1/8–1/4	0	4½-7	0
All others (1936-42)	1/8–1/4	1	1	8
521, 523, 524, 525, 528, 532, 548 (1942-46)	1/8–1/4	1	1	8
552 (1944-45)	1/8–1/4	0	5	0
552 (1946)	N 1/32–1/8	0	4½-7	0
584, 585, 587	1/8–1/4	1	1	8
LA FRANCE-REPUBLIC				
All models	1/8–1/4	1	1½-2	8
MARMON-HERRINGTON				
All Ford 1½-ton models (1936-46)	0–1/8	0	1½	0
All LD models (1936-46) and DVL-1 (1946)	1/16–1/8	0	1½	8¼
MH440-4 (1946)	1/16–1/8	0	0 -1	2
MH555-4 (1946)	1/16–1/8	0	0 -1	0
All other models	0–1/8	0	4	0
OSHKOSH				
JCB, JD, W-100, W-200 (1940-41)	0–1/8	1½	1	8½
WLX, WLD, B3S, B3D, C3S, C3D, R3S, FC35, FB35, FS, FC, FB	0–1/8	1½	3½	0
W-100, W-200 (1942); W-2300, W-300, W-400, W-500, W-600, W-700	0–1/8	1	1	3
W-900, BG3, GD	0–1/8	1½	1½	6
W-800	0–1/8	1½	1	6
W906	0–1/8	½	1	3
PETERBILT				
All Models (1944-45)	0–1/8	1	1½	8
REO				
1A4, 1B4, 1B4R, 1B4Y, 1C4, 1D4 1D4R, 1D4Y, 1D4M, 2B4, 2B4R, 2D4, 2D4R, 2L4, 2L4C, 2LM, 1L5 (1935)	1/16–1/4	1½	¾	8½
2L4H, 21MH, 2H, 2HR, 2J, 2JR, 2K, 2KR, 3H, 3HR, 3J, 3JR, 3K, 3KR, 3M, 3MR, 3L8, 3L8, 3LC6 (1935)	1/16–1/4	1	1½	8½
4H, 4WH, 4J, 4WJ, 4K, 4WK, 4M, 4WM (1935)	1/16–1/4	1	1¼	8½
S4P (1935)	0–1/8	1½	3½	8
6AP (1936)	0–1/8	1½	2½	8
1A4, 1A4H, 1CA, 1C4H, 1B4, 1B4H, 1D4, 1D4H, 2D4, 2B4, 2LC4, 2H5, 2J5 (1936)	1/16–1/4	1½	¾	8½
2D4M, 2DM4H (1936)	1/16–1/4	1	¾	8½
3H5, 3J5, 3K5 (1936)	1/16–1/4	1	1½	8½
3HR5, 3JR5, 3KR5, 4J5, 4K5 (1936)	1/16–1/4	1	1¼	8½
450, 650 (1937)	0–1/8	1½	2	8
475, 675 (1937)	0–1/8	1½	2	7
3P7 (1937)	1/16–1/4	1	½	8½
1A4, 1A4H, 1C4, 1C4H, 1B4, 1B4H, 1D4, 1D4H, 2B4, 2D4, 1L5, 2L4, 2L4H (1937-38)	1/16–1/4	1½	¾	8½
2H5, 2J5 (1937-38)	1/16–1/4	1	¾	8½
3H5. 3J5. 3K5. 3HR5, 3JR5, 3KR5 (1937-38)	1/16–1/4	1	1½	8½
4H5, 4J5, 4K5, 36H, 2L7M, 2L7MH, 3L8H (1937-38)	1/16–1/4	1	1¼	8½
1B7M, 2B7M (1938)	1/16–1/4	1	1	8½
19, 20, 21, 22, 23 (1940-46)	1/16–1/4	1	¾-1¼	8
4D19, 6D19, D20, OSL-41, NWL-41 (1941-42)	1/16–1/4	1	¾-1¼	8
23H, 25, 27 (1942)	1/16–1/4	1	¾-1¼	8
19BHS, 19CHS, 20XHS (1944-46)	1/16–1/4	1	¾-1¼	8
STERLING All models	1/16–1/32	1	1½-2	8

TRUCK MAKES AND MODELS	TOE-IN (In inches unless otherwise shown)	CAMBER (In degrees)	CASTER (In degrees)	KING PIN SLANT (In degrees)
STEWART				
41H, 46H, 47H (1935-36)	1/32–1/16	1	0	9
18XS, 48-8, 58X (1935-36)	1/32–1/16	2	2½N	7½
18XS, 32X, 48-8, 58X (1935-36)	1/32–1/16	2	1½N	7½
27XS, 31X (1935)	1/32–1/16	1	½	8
29XS, 32X (1935)	1/32–1/16	2	1½N	7½
38-8, 38-6 (1935-36)	1/32–1/16	1	1½N	8
40H, 60H (1935-36)	1/32–1/16	1½	1½	7
46HB, 48HB, 47HB, 49HB (1935-36)	1/32–1/16	2	½N	7½
48H, 50H (1935-36)	1/32–1/16	2	1¾N	7½
49H (1935-36)	1/32–1/16	2	0	7½
40HC, 60HC (1937)	0	1½	1¼-1½	7
61H, 47A, D10A 47A (1937-38)	0	1	1¼-1½	8½
45A (1937-38); 45AL (1938)	0	1	1 -1¼	9
49A, 50A, 51A, D30A (1937-38)	0	2	1½-1¾	8½
58A, 59A (1937-38)	0	2	1¾-2	8½
36-6, 31X (1937-38); 38A (1940-42)	0	2	1 -1¼	8
47AB, 49AB, 51AB	0	1	1½-2	8½
49A (1940-42)	0	2	1½-1¾	9
58A, 59A (1940-42)	0	2	1¾-2	8
STUDEBAKER				
S20, S30 (Before serials 3401715 and 3425745) .S40, S50, S60, S41, S51, S61, S120, S130, S140, S150, S6, S8 (1931-33)	1/16–1/8	0-1	¼-¾	8
S20, S30 (After serials 3401715 and 3425745) S21, S31, S2, S3 (1931-33)	1/16–1/8	0-1	¼-¾	9
1T2, 2T2 (1935-36)	1/16–1/8	1	¼-1	9
1T6, 1W7, 1W8, 2W6, 2W7, 2W8 (1935-36)	1/16–1/8	1	¼-1	8
J5 (1937)	1/16–1/8	1–½	1 -1½	9½
J15, J15M (1937); K10, K15, K15B (1938-40)	1/16–1/8	1	½-1	9
J20, J25, J30 (1937); K20, K25, K30 (1938-40)	1/16–1/8	1	½-1¾	8
J20M, J20MB, J25M, J25MB, J30M (1937)	1/16–1/8	1	½-1	8
K5 (1938); L5 (1939)	1/16–1/8	¼-¾	0 -1½	8½
K15M, K20M, K20MB, K25M, K25MB, K30M (1938)	1/16–1/8	1	0 -1½	8
Coupe Express (1941-43)	1/16–1/8	1	2	7½
M5 (1946)	1/16–1/8	2	1½	7½
All Other Models (1941-46)	1/16–1/8	1	1¾	8
WALTER				
FN, FM, FKM, FZM, FCK, FC, FCR, FB, FBR, FG, FGB, FGR, FXB, FXR	N 1/32	1½	5	2
WARD LA FRANCE				
D-1, D1C, D-2, D-3, D-3 (Spec.)	1/8 ± 1/32	¾-1½	½-1½	8
D-1B	1/8 ± 1/32	½-1½	½-1½	8
WHITE				
15, 15B	1/8 ± 1/32	1½	1½	0
160, 161, 162, 60, 60K, 601, 602	1/8 ± 1/32	1	3¾	8½
20, 20A, 20D	1/8 ± 1/32	1½	3	0
210, 211, 212, 611, 612, 612K, 613	1/8 ± 1/32	1	3½	8½
40, 40A, 40D, 45, 45A, 45D, 52, 52D, 52T, 55, 50B (Elliott Type Axle)	1/8 ± 1/32	1½	0	0
51AS. 58S. 620K 621K. 63, 63D. 64. 640 50B. 51A (Reverse Elliott Type Axle)	1/8 ± 1/32	1	3½	8½
51, 51A (Elliott Type Axle)	1/8 ± 1/32	1½	2¾	0
53, 701, 702	1/8 ± 1/32	1	1½	8½
59, 59A, 691	1/8 ± 1/32	1	2¾	8½
58	1/8 ± 1/32	1½	1½	0
618, 618K, 620, 621, 630K, 631, 631K, 640K, 641K, 642, 643, 58SS	1/8 ± 1/32	1	3¼	8½
57	1/8 ± 1/32	1½	2½	0
58, 685, 706M	1/8 ± 1/32	1	2½	8½
730, 731	1/8 ± 1/32	1	2½-3½	8½
500, 510, 512, 700, 800, 802, 804	1/8 ± 1/32	1	1½	8
701, 702	1/8 ± 1/32	1	1½	8½
703, 704, 704K, 705, 709, 710, 720, 720T, 722	1/8 ± 1/32	1	3	8½
708	1/8 ± 1/32	1	3	8
712	1/8 ± 1/32	1	2¾	8½
718, 750, 750T	1/8 ± 1/32	1	2	8½
805, 809, 810	1/8 ± 1/32	1	3	8½
812, 818, 850	1/8 ± 1/32	1	3½	8½
820, 822	1/8 ± 1/32	1	3½	8
White Horse (1940)	1/8 ± 1/32	1	3¼	9
White Horse (1941)	1/8 ± 1/32	1	1	9
WA14, WA18, WA20, WA134, WA2064	1/8 ± 1/32	1	2½	8
WA22, WA26, WA28, WA34, WA114, WA118, WA120, WA122, WA126, WA2264	1/8 ± 1/32	1	2½	8½
WILLYS				
C101, T101, C113, C131, C157, 77 (1929-37)	1/8	2	1 -2	7½
37, 38, 48, 440, 441, 440P, 441P, 442, 442P (1937-42)	1/32	2	3	7½
CJ-2A (Universal Jeep)	1/32	1½	3	7½

N—Negative P—Positive T—Toe-out °— ± 1 degree



TENSIONS

for use with Torque Wrenches

THERE are several places on an engine where the proper tightness of studs or nuts is extremely important—the cylinder head, main and connecting rod bearings, for example.

Improper tension of the cylinder head studs or bolts may cause compression leaks. Lack of uniformity—where some studs are pulled tighter than others—may crack or distort the head. Even the shape of the cylinders may be changed, causing piston seizing and blow-by.

In the case of bearings, uneven tension in tightening the nuts will cause uneven wear, perhaps seizing.

These difficulties are easily avoided by the use of a tension wrench and the data in the Table below, which has been obtained directly from the engine manufacturers. It represents the best performance standards for the engine listed and lower maintenance costs for your fleet.

TENSION SPECIFICATIONS FOR USE WITH TENSION WRENCHES

Readings are given in Pounds Feet. To convert for wrenches scaled in Pounds Inches, multiply by 12.

ABBREVIATIONS:

* Center and Rear. ** Front and Intermediate.
*** Connecting Rod $\frac{7}{16}$ In. † Babbitt.
‡ Connecting Rod $\frac{1}{2}$ In.
Note 1—Rocker Arm Support 29 (1938) 27½ (1939)

Note 2—Spark Plug Tensions:
$\frac{7}{16}$-18, cast iron head—34-38
18mm, cast iron head—28-32
18mm, aluminum head—24-28
14mm, cast iron head—24-28

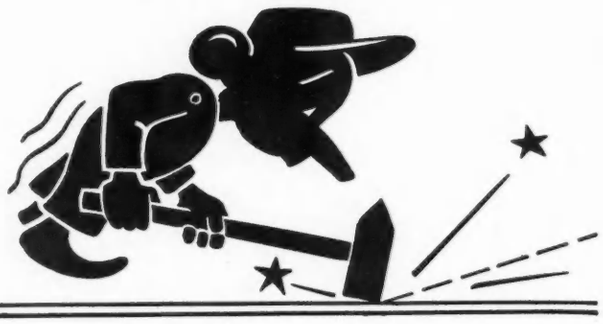
14mm, aluminum head—20-24
Note 3—Injector crab nut 11.
Note 4—All 18mm, plugs 33-42.
Note 5—Manifold 100-110.
Note 6—Manifold 70-75.

Note 7—Sparkplug.
Iron head—28-30.—Aluminum head—26-28.
Note 8—85-90 Pounds-Feet for cylinder heads on 24A, 100A, 110A, 120A, 140A, 140TA, 150A. For all other locations and models see table.

Engine Make and Model	Cylinder Head	Main Bearings	Connecting Rod Bearings
AUTOCAR			
All models equipped with 377, 447, 501 engines	80-85	130-140	85-90
All models equipped with HB600 diesel engines	430-450	310-330	105-115
BUDA			
All Models	$\frac{5}{8}$"- 60- 70 $\frac{7}{16}$"- 75- 85 $\frac{1}{2}$"- 95-105 $\frac{9}{16}$"-125-135 $\frac{5}{8}$"-150-160	$\frac{11}{16}$"-195-200 $\frac{3}{4}$"-210-230 $\frac{13}{16}$"-230-250 $\frac{7}{8}$"-245-275 1"-285-315 1$\frac{1}{8}$"-325-350	
CHEVROLET			
(1938) (Note 1)	67	106	.....
(1939) (Note 1)	78	.....	.....
(1940-46)	75- 80	100-110	40- 45
CONTINENTAL			
A6244 (Note 4)	70- 75	100-110	35- 40
B6371, B6405, B6427 (Note 8)	70- 75	100-110	100-110
E600 E601, E602, E603, (Note 5)	100-110	100-110	100-110
F4124, F4140, F4162 (Note 4)	70- 75	100-110	35- 40
F6170, F6199, F6209, F6218, F6226 (Note 4)	$\frac{5}{16}$"-35-40 $\frac{7}{16}$"-70-75	100-110	35- 40
M6271, M6290, M6330, M6253 (Note 6)	70- 75	$\frac{5}{16}$"-100-110 $\frac{7}{16}$"-130-140	70- 75
20R, 21R, 22R (Note 5)	100-110	100-110	100-110
R6513, R6572, R6602	100-110	100-110	100-110
Y4069, Y4091, Y4112	40- 45	100-110	20- 25
CUMMINS			
A	190-210	150-170	40- 45
H, HS, NH, NHS	430-450	310-330	105-115
DODGE			
All models with gasoline engines	Nuts 53- 57½ Plain head cap screws 65- 70	75- 80	60- 65
DODGE—Cont.			
Diesel	Cupped head cap screws 67½-72½ 80- 85	75- 80	60- 65
FORD (1938-46) (Note 2)			
85 and 100 h.p. aluminum	40	75	35
iron	60	75	35
60 h.p. aluminum	30	50	24
iron	50	50	24
GMC (General Motors Truck) (By engine models)			
228	75-80	70-80	40-50
236	75-80	70-80	40-50
248	75-80	70-80	40-50
270	75-80	70-80	40-50
278	75-80	75-85	65-75
308	75-80	75-85	65-75
361	75-80	90-100	90-100
426	75-80	90-100	90-100
477	75-80	90-100	90-100
HERCULES			
ZX Series	35	77	25
IX Series	35	77	42
OO Series	60	105	53
QX Series	60	*60 **70	39
JX Series	75	*60 **70	56
WX Series	60	*70 **105	105 ***53
YX, RX Series	75	*105 **123	105 §115
RXL Series	80	175	158 †123
HX Series	105	*193 **210	263
DOO Series	158	*77 **95	140
DJX Series	158	*77 **95	140
DWX Series	158	175	158
DRX Series	$\frac{5}{8}$"-175 1"-260	175	158
DHX Series	$\frac{11}{16}$"-175 1$\frac{1}{16}$"-350	*193 **210	263
DFX Series	300	260	263
INTERNATIONAL HARVESTER			
GRD, HD	$\frac{7}{16}$"-60-70	$\frac{1}{2}$"-100-110	$\frac{7}{16}$"-75-85
BLD, FA	$\frac{1}{2}$"-75-85	$\frac{7}{16}$"-100-110	$\frac{7}{16}$"-75-85
FB, RED	$\frac{1}{2}$"-100-110	$\frac{7}{16}$"-100-110	$\frac{7}{16}$"-75-85
REO			
S140, S209	60- 61	87- 98	49-52½
S228, S3-268, S3L268, S5-309, GC228, GC245, GC268, GC310	83-100	67-75	70-75
STUDEBAKER			
J5, J10, J15, J15M, J15B, K5, K10, K15, K15M, K15B, L5 (Note 7)	83	92	54
Coupe Express, Standard (1941)	50	92	27
Heavy Duty (1941)	83	92	54
M5, M15, M15A	46-50	88-95	28-32
M16	77-83	88-95	40-44
WAUKESHA			
6B Series	73-75	88-92	67-69
6M Series	73-75	96-100	67-69
6SR Series	73-75	129 133	121-125
130 Series	96-100	109-113	67-69
140 Series	130-134	130-134	121-125
CHK, HL	130-134	130-134	67-69
WK WOK	130-134	130-134	86-88
FEB	130-134	125-130	67-69
6GAK, 6GAL	130-134	125-130	73-75
6AB, 6RB, 6RBR	117-121	130-134	73-75
HBKH	130-134	130-134	73 75
145 Series	130-134	242-250	73-75
6WA Series	146-150	242-250	86-88
6EK, 6EKH, 6LK, 6LRD, 6LRH	290-300	242-250	165-174
WHITE			
All Models (Note 8)	$\frac{5}{8}$"- 28- 32 $\frac{7}{16}$"- 48- 52 $\frac{1}{2}$"- 70- 75	$\frac{7}{16}$"-105-115 $\frac{1}{2}$"-140-150 $\frac{9}{16}$"-175-185	
WILLYS			
48, 440, 441 442 CJ-2A (Note 7)	Screws 65-75 Nuts 60-65	65-70	50-55

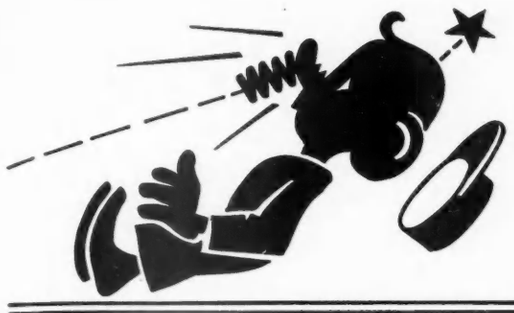
Trucks

	Year	VALVE SPRINGS			
		Valve Open		Valve Closed	
		Pressure (Ave.) Pounds	Length Inches	Pressure (Ave.) Pounds	Length Inches
AUTOCAR					
All models having the 315, 331, 358 377, 404, 408, 447, 453 and 501 cu. in. engine	..	110	2 1/32	78	2 3/16
All models having the HB600 Diesel	..	136	2 1/32	87	2 1/16
BROCKWAY					
78	19 9–1942	98–104	1 5/8	42.5-47.5	1 31/32
83, 88, 92, 94 1st	19 9–1942	105–111	1 31/32	43.6-47.6	2 3/16
2nd		111–118	1.521	53–59	1 7/8
112, 128, 146, 147	1940-1942	102–110	1.521	45–51	1 7/8
152, 153, 154, 162, 156, 166 O.	1940-1942	111–118	1.521	53–59	1 7/8
I.		28–32	1 11/32	11.3-14.3	1 11/32
170X, 195X, 175X, 220X, 240X, 260X O.	1939-1942	105–115	1 7/8	54.7-58.7	2 1/4
I.		47–53	1 15/32	20.4-24.4	2 3/32
96, 130, 125X, 145, 150X4, 150X5, 160X, 165X O.	Up to 1940 Inclusive	90–98	1 11/32	43.5-49.5	2 1/4
I.		31–35	1 3/4	16.6-19.6	2 1/32
88W, 88WH, 146W	1944-1946	110–118	1.52	53–59	1 7/8
152W, 154W O.	1944-1946	110–118	1.52	53–59	1 7/8
I.		28–32	1 11/32	11.3-14.3	1 11/32
260XW, 154WH O.	1944-1946	160–170	1 3/4	67–73	2 1/4
I.		82–88	1 3/4	33–37	2 1/4
CHEVROLET					
All models	1939-1940	127	1 1/2	52	1 13/16
All models (except 2-ton)	1941-1946	128	1 1/2	55	1 13/16
All trucks 2-ton	1946	132	1 1/2	58	1 13/16
CORBITT					
See specifications under applicable engine.					
DIAMOND T					
404, 404SC, 404C, 406, 509, 509SC, 509C, 612, 612SC, 612C, 614, 614SC, 614C		58	1.594	43	1.920
702, 702C, 805, 805C, 806, 806C, 900		102	2 1/32	50	2 11/16
DODGE					
TC, TD, VC, VD	1939-1940	80	1 7/16	36	1 3/4
TE, TF, TG, TH	1939	105	1 13/16	42 1/2	1 3/4
TL, TK, RO, RP, VL, VK, WL, WK	1939-1942	94	2 3/4	57 1/2	3 1/8
VF, VM, VG, VH, VR, VS, WC, WD, WF, WFM, WG, WH, WGM, WHM	1940-1942	111	1 3/8	42 1/2	1 3/4
WC, WF, WFA, WFM, WH, WHA	1944-1946	111	1 3/8	42 1/2	1 3/4
FEDERAL					
8	1940-1942	37	1 3/8	19	1 11/32
15, 18, 20, 25, 29	1939-1942	52	1 7/16	31	1 13/16
40, 50, 35, 45, 55	1939-1942	60 1/2	2 1/16	47	2 7/16
C7, C8, 63	1939-1942	94	2 11/32	59	2 11/32
62 O.	1939-1942	50	1 13/32	22 1/2	2 3/32
I.		110	1 7/8	56 3/4	2 1/4
18M, 29M	1944-1945	52	1 7/16	31	1 13/16
45M, 55M O.	1944-1945	114	1.52	56	1 7/8
I.		30	1 11/32	12.8	1 13/32
60MA O	1944-1945	110	1 7/8	56 3/4	2 1/4
I.		50	1 13/32	22 1/2	2 1/32
FORD					
60	1939-1940	48–52	1.80	26–30	2.05
85, 95, 100, 90 (6-Cyl.)	1939-1946	76–80	1.827	37–40	2.13
30 (4-Cyl.)	1940-1945	60–63	1.84	30–33	2.13
F. W. D.					
HS, T26, HA, T30		101-119	1 3/4	56–66	2 1/8
HG, HR, HM, HH6, CUA, CU, T32		93–109	1 31/32	59–69	2 11/32
SUA, SU, YU, MJ6, MJ6, T40, MJ 6X6		89–99	2 3/32	54–64	2 1/2
M7, T45, T60, T65, M6, M6X6		105–115	3 1/32	65–75	3 3/32
M10 O.		85	3 1/32	43–52	3 5/8
I.		47	2 1/16	24–31	3 1/32
GMC (General Motors Truck) (By engine models)					
228		124–140	1.505	54–62	1.821
236		124–140	1.505	54–62	1.821
248		124–140	1.505	54–62	1.821
270		124–140	1.505	54–62	1.821
278		117–125	1 11/32	58–64	1 13/32
308		117–125	1 13/32	58–64	1 13/32
361		117–125	1 13/32	58–64	1 13/32
426		117–125	1 13/32	58–64	1 13/32
477		117–125	1 13/32	58–64	1 13/32
HUDSON					
58	1946	80	1 31/32	40	2
HUG					
19W, 23W, 85W, 83W	1939-1942	110–119	1 3/4	61–66	2 1/8
87W, 42W, 87W6	1939-1942	101–109	1 31/32	64–69	2 11/32
92U, 43W, 44-4, 45-4	1939-1942	94–99	2 3/32	59–64	2 1/2
98, 99, 99S	1939-1942	110–115	3 1/32	70–75	3 3/32
51-6 O.	1942	84	3 1/32	43–52	3 5/8
I.		45	2 1/16	24–31 1/2	3 1/4
INTERNATIONAL HARVESTER					
D2, D15, D30, D300, K1, K2, K3, K4, K5		85	1 13/32	47	2 1/4
D35, D40, D400, K6, K7, KR7		93	1 13/32	56	2
D50, D500, D60, D70, D700, K8, K10, K11 O.		90	1 13/32	40	2 3/32
I.		45	1 13/32	20	1 13/32
A7, A8, AR626F O.		140	2 1/32	61	2 1/2
I.		79	1 13/32	36	2 1/32
KR-11, KS-11 O.		136	1 13/32	56	2 1/32
I.		86	1 13/32	35	1 13/32



BECAUSE the percentage of valve springs that fail in service is small, in comparison with other truck parts, mechanics are inclined to overlook checking valve spring pressures when doing valve jobs or overhauls. This is a mistake because overheating can take some of the temper out of them, cause them to become brittle and reduce their resilience. Blow-by and moisture caused by condensation or internal leaks, affect valve spring life. Also, constant contraction and expansion eventually cause fatigue which destroys their resilience and shrinks them in size.

	Year	VALVE SPRINGS			
		Valve Open		Valve Closed	
		Pressure (Ave.) Pounds	Length Inches	Pressure (Ave.) Pounds	Length Inches
KENWORTH					
505, 506, 507, 508, 509, 514, 515, 516, 510, 511, 512, 519, 520, 521, 522, 523, 524, 548, 549, 550, 552, 584		136	2 1/32	87	2 11/16
525, 528, 587		Free length-2 1/8		(125-138 @ 1 11/16)	
543, 544, 545, 546		113	2	69	2 1/16
513, 536, 537, 538, 551		58	1.594	43	1.920
553, 554, 555, 556		64	2 1/16	50	2 5/16
MARMON-HERRINGTON					
J-5, J-6, JJ-5, JJ-6, LD-5, LD-6, LLD-5, LLD-6, OT-4, OT-5, OOT-4, OOT-5, M-5, M-6, MM-5, MM-6	1941-1944	76–80	1.827	37–40	2.13
6M-5, 6M-6, 6LD-6, 6OT-5	1942-1944	76–80	1.824	37–40	2.13
DSD-100, DSD-200, DSD-300	1941-1944	58	1.594	43	1.920
DSD-400, DSD-500, DSD-550, DSD, 550DR, DSD-600, DSD-700, DSD-800	1941-1944	102	2 1/32	50	2 11/16
DSD-900, DSD-1000 O.	1941-1944	84	3 5/16	47	3 1/32
I.		45	2 1/16	27	3 1/4
DVL-1	1946	116	1 3/4	50	2 1/16
MH440-4, MH555-4	1946	102	2 1/32	50	2 11/16
OSHKOSH					
JCB, JDS, W-100, W-200	1939-1945	58.7	1.594	43	1.920
W-300, W-400, W-500, W-600, W-700, W-703, W-800	1939-1945	102	2 1/32	50	
BG3, GD O.	1939-1945	84	3 5/16	47	2 11/16
I.		45	2 1/16	27	3 1/32
W-900, W-908	1939-1945	136	2 1/16	87	3 1/4 2 1/16
PETERBILT					
344DT, 354DT	1944	136	2 1/16	87	2 1/16
270D, 345DT, 355DT	1945	136	2 1/16	87	2 1/16
REO					
1B4, 1B4H, 1D4, 1D4H, 1BM7, 2B4, 2D4, 2L4, 2H, 2J, 2K, 2L, 2B, 2D, 2D4M, 2D4MH, 2BM7, 2L7M, 2L4H, 2L7MH, 2H5, 2J5, 3H, 3J, 3K, 3M, 3H5, 3J5, 3K5, 3HR5, 3JR5, 3KR5, 3L6H, 4H, 4J, 4K, 4M	1936-1938	135–145	2 1/16	50–54	2 3/16
19, 20, 21, 22, 23	1940-1946	135–145	2 1/16	50–54	2 3/16
23XHS, 25VXS, VBS	1944-1946	102–110	1.521	45–51	1 7/8
27VXS	1944-1945	106–115	1 3/8	54.7-58.7	2 1/4
STERLING (See Cummins & Waukesha Listings)					
STUDEBAKER					
J5-K5, J10-K10, J15-K15, M16	1937-1942	125–135	1 3/4	57	2 1/32
J20-K20, J25-K25	1937-1940	75–80	1 11/32	41–45	1 13/16
J30-K30	1937-1940	80–85	2 1/32	45–50	2 3/16
M5-M15-M15A	1941-1946	90–94	1 13/32	52–56	1 13/32
M16	1946	125–135	1 3/4	54–60	2 1/32



VALVE SPRING PRESSURES

The inability of the spring to close the valve promptly, and to hold it in a closed position, will cause serious compression or combustion leaks, or both.

The best means of determining the re-usability of valve springs is by measuring their resilience because that is the job they are required to do. The practice of comparing their free lengths is likely to lead to trouble. Valve springs should be measured for resiliency in both open and closed positions before replacement. To disregard this procedure is to invite burned or sticky valves, decrease engine power and fuel waste.

Engines	Year	VALVE SPRINGS: Valve Open — Pressure (Ave.) Pounds	Valve Open — Length Inches	Valve Closed — Pressure (Ave.) Pounds	Valve Closed — Length Inches
WALTER					
FN, FZM		101	1 31/32	64	2 11/32
FKM, FC, FCK, FCR		94	2 5/32	59	2 15/32
FGB, FGR O.		158	2 3/8	67	2 13/32
FGB, FGR I.		100	2 1/16	42	2 3/32
WHITE (By engine models)					
1A, 1AB O.		80-85	2 3/16	Free Length	3 1/4
1A, 1AB I.		49-53	1 5/8	Free Length	2 7/16
1A, 1AB (A) O.		68-72	2 3/8	Free Length	3 1/2
1A, 1AB (A) I.		68-72	1 5/8	Free Length	2 3/4
4AB (beginning with No. 2832)		97 103	2 1/4	Free Length	2 7/8
3A O.		48-52	2 1/8	Free Length	3 1/16
3A I.		88-92	1 3/4	Free Length	2 11/32
3A, 1347, 3AD O.		58-62	2 1/8	Free Length	3
3A, 1347, 3AD I.		68-72	1 3/4	Free Length	2 1/2
5A O.		68-72	2 3/8	Free Length	3 1/2
5A I.		68-72	1 5/8	Free Length	2 3/4
5A (B) O.		86-94	2 3/8	Free Length	3 1/8
5A (B) I.		86-94	1 5/8	Free Length	2 3/32
7A, 14A, 15A, 18A, 25A O.		58-62	2 1/8	Free Length	3
7A, 14A, 15A, 18A, 25A I.		68-72	1 3/4	Free Length	2 1/2
8A		71-76	1 13/16	Free Length	2 7/32
9A, 11A, 13A, 16A		82-87	2 1/32	Free Length	2 27/32
11A, 13A, 16A (C)		99-107	2 3/32	Free Length	3 1/16
21A, 140TA		99-107	2 3/32	Free Length	3 3/32
20A, 21A 30A		119-127	2	Free Length	3 1/16
100A, 110A, 120A, 140A, 150A		99-107	2 3/32	Free Length	3 3/32
WILLYS					
38, 48, 440	1938-1940	85.5	1 11/16	46	2 1/4
441, 441P, 442, 442P	1941-1942	116	1 3/4	50	2 7/32
CJ-2A (Universal Jeep)	1945-1946	116	1 3/4	50	2 7/32
CONTINENTAL					
A6244 1st		105-111	1 27/32	43.6-47.6	2 1/16
A6244 2nd		111-118	1.521	53-59	1 5/8
B6371, B6405, B6427 O.		102-110	1.521	53-59	1 5/8
B6371, B6405, B6427 I.		28-32	1 11/32	11.3-14.3	1 13/32
E600, E601, E602, E603 O.		90-98	1 27/32	43.4-49.5	2 1/4
E600, E601, E602, E603 I.		31-35	1 3/4	16.6-19.6	2 3/32
Y4069, Y4091, Y4112		Free Length 2		47-53	1 15/32
F6186, F6209, F6228		Free Length 1 13/16		42.5-47.5	1 7/32
F4124, F4140, F4162		78-86	1 21/32	47 53	1 11/32
F6170, F6199, F6209, F6218		98-104	1 3/8	42.5-47.5	1 7/32
M6271, M6290, M6330		111-118	1.521	53-59	1 5/8
CONTINENTAL, Continued					
22R O.		106-115	1 7/8	54.7-53.7	2 1/4
22R I.		47-53	1 11/16	20.4-24.4	2 3/32
R6513, R6572, R6602 O.		160-170	1 3/4	67-73	2 1/4
R6513, R6572, R6602 I.		82-88	1 3/4	33-37	2 1/4
CUMMINS					
A Series (Int. & Exh.)		108-118		66-72	3 1/16†
H Series (Int. & Exh.)		129-143		83-91	3 13/32†
K, KO, L Series (Int. & Exh.)		226-250		105-115	4 5/16†
NH, NHS		102		72	3 1/4
HERCULES (Series)					
BX, ZX		35	1 1/32	22	1 1/8
NX, IX-3, IX-5		42	1 3/8	21	1 1/8
OO, JX		53	1.594	43	1.920
K, L, G, E		73	3 1/8	59	3 3/8
TX		100	3 1/16	73	3 1/8
QX *		41	1 3/8	17	1 3/4
QX **		37	1.231	19	1.656
OX, WX, WXL, YX, RX, RXL		102	2 1/8	50	2 3/4
HX O.		84	3 5/16	47	3 1/8
HX I.		45	2 1/8	27	3 1/4
DIX, DOO, DXJ O.		55	1.406	31	1.781
DIX, DOO, DXJ I.		37	1.231	19	1.656
DRX O.		48	1.419	27	1.844
DRX I.		30	1.355	17	1.750
DHX, DFX O.		94	2 3/4	55	3 1/4
DHX, DFX I.		57	2 1/4	32	3 3/4
WAUKESHA					
ICK		30	1 1/8	22	1 3/4
FCS, FC		71	1 5/8	36	1 13/16
XAH Exh.		62	1 5/8	51	1 7/8
XAH Int.		65	1 1/8	51	1 7/8
XBKH, 130HS, 130HL, 130GS, 130GL O.		100	1 1/2	39	2 1/8
XBKH, 130HS, 130HL, 130GS, 130GL I.		55	1 7/8	26	1 13/16
VIM, VIK, VIS, VIL		53	1 13/16	38	2 1/8
VBKH O.		61	1 7/8	36	1 3/4
VBKH I.		33	1 1/4	22	1 1/4
UMA		72	1 7/8	36	1 3/4
VRZ, VRZG, VRZH O.		72	1 7/8	36	1 3/4
VRZ, VRZG, VRZH I.		33	1 1/4	22	1 1/4
CHK, CHS		78	2 1/8	54	2 1/2
HS		90	3 5/8	65	3 1/2
WBFH O.		127	2 1/8	76	3 1/16
WBFH I.		106	2 1/2	66	3 1/8
WK		122	5 1/4	78	5 3/4
WOK Exh.O.		123	4 1/4	77	5
WOK Exh.I.		111	3 1/2	55	4 1/2
WOK Int.O.		123	4 1/4	77	5
WOK Int.I.		97	2 1/2	55	4 1/2
6BL, 6BK, 6BM, 6BZ		110	1 3/4	61	2 1/2
6BKH O.		100	1 1/2	39	2 1/8
6BKH I.		55	1 7/8	26	1 13/16
6MK, 6M2, 6MKR, 6MZR		101	1 1/2	64	2 1/16
6SRLR, 6SRKR		94	2 1/16	59	2 1/32
140GS, 140GK, 140HS, 140HK O.		86	1 1/2	31	2 3/8
140GS, 140GK, 140HS, 140HK I.		55	1 7/8	26	1 13/16
145GS, 145GK, 145HS, 145HK O.		158	2 5/8	67	2 1/32
145GS, 145GK, 145HS, 145HK I.		100	2 1/8	42	2 1/32
6GAK, 6GAL O.		140	2 1/8	61	2 1/2
6GAK, 6GAL I.		79	1 1/2	36	2 1/32
6RB		110	3 1/16	70	3 1/16
6WA O.		140	2 1/8	50	3 1/16
6WA I.		125	2 1/2	42	3 3/32
6E, 6N O.		140	3 5/8	66	4 1/16
6E, 6N I.		99	2 1/32	60	3 1/16
6LR Exh.O.		124	4 1/2	77	5
6LR Exh.I.		137	3 1/2	90	4 1/2
6LR Int.O.		119	4 1/4	77	5
6LR Int.I.		132	3 1/2	90	4 1/2
150		41	1 1/2	20	1 1/2
160		65	1 1/2	48	1 3/4

ABBREVIATIONS (A) Used beginning 1A, No. 1729 and 1AB, No. 169. (B) Must be used with vibration damper and 3-in.-wide timing chain. (C) Used beginning 11A, No. 3342; 13A, No. 176 and 16A, No. 9. I.—Inner O.—Outer Int.—Intake Exh.—Exhaust *—Up to 1600 R.P.M. **—Above 1600 R.P.M. †—Free Length

Transportation Engineering Formulas:

TRANSPORTATION FORMULAS

VEHICLE SPEED

$$MPH = \frac{RPM \times R}{168 \times FGR}$$

MPH = Miles Per Hour
RPM = Engine Revolutions Per Minute
R = Rolling Radius
FGR = Final Gear Ratio
168 = A constant comprising the conversion of rolling radius in inches to wheel circumference in feet; wheel revolutions per minute to wheel revolutions per hour; feet per hour to miles per hour

MAXIMUM NET TORQUE

$$\text{Max. Net Torque} = \frac{\text{Torque at Peak HP} \times 5}{4}$$

(This is approximate and should be used only when actual net torque is not known.)
5 and 4 = Figures based on an analysis of a number of torque curves

MAXIMUM NET ENGINE TORQUE

Torque in lb. ft. = .70 × cu. in. Piston Displacement. (This is approximate and should be used only when actual torque is not known.)
.70 = Average figure based on analysis of a number of torque curves.

TORQUE AT PEAK HORSEPOWER

$$\text{Torque at Peak HP} = \frac{HP \times 5252}{RPM}$$

5252 = Constant resulting from the conversion of torque and RPM into horsepower
HP = Maximum net horsepower (See Horsepower below)
Peak HP = Maximum useful horsepower

FINAL GEAR RATIO

$$FGR = \frac{R \times GVW \times (GA + .012)}{\text{lb. in. Torque} \times .90}$$

GA = Grade Ability
GVW = Gross Vehicle Weight
lb. in. Torque = 12 × lb. ft. Torque
R = Rolling Radius in Inches
.90 = Efficiency for all rear axles except worm, then .85
.012 = Rolling resistance on hard-surfaced roads

DRAWBAR PULL

$$DP = \frac{.90 \times \text{lb. in. Torque} \times FGR}{R} - .012\ GVW$$

DP = Drawbar Pull
R = Rolling Radius in Inches
FGR = Final Gear Ratio
GVW = Gross Vehicle Weight
.90 = Efficiency for all rear axles except worm, then .85
lb. in Torque = 12 times Torque in lb. ft.
.012 = 12 lb. per 1000 lb. Rolling Resistance

AIR RESISTANCE

Air Resistance = .0025 X (MPH)² X FA
FA = Frontal area of equipment in sq. ft.
MPH = Miles Per Hour

ENGINE SPEED

$$RPM = \frac{MPH \times 168 \times FGR}{R}$$

(See left for abbreviations)

PISTON DISPLACEMENT

Piston Displacement in cu. in. = B × B × .7854 × S × No. of Cylinders

B = Bore
S = Stroke
.7854 = Constant comprising the conversion of the area of a square to the area of a circle of the same dimensions

HORSEPOWER

Maximum Net Horsepower (maximum gross horsepower less power consumed by engine accessories) is the only horsepower that should be used in transportation engineering formulas, and can be determined only by using a dynamometer or may be procured from the manufacturer

DIESEL ENGINE SPECIFICATIONS

DIESEL ENGINE MAKE AND MODEL	Number of Cylinders Bore and Stroke (In.)	Piston Displacement (Cu. In.)	HORSEPOWER			TORQUE	Shipping Weight (Lb.)	VALVES	
			With Bare Engine	With Standard Accessories					
			Maximum Brake Hp. at Specified R.P.M.	Max. Intermittent Hp. at Specified R.P.M.	Continuous Sustained Hp. at Specified R.P.M.	Max. Torque in Lb. Ft. at Specified R.P.M.		Intake Port Diameter and Lift (In.)	Exhaust Port Diameter and Lift (In.)
BUDA									
6-DT-468	6-4¼x5½	468	113-2000	89-2000	68-1600	268.5-1100	1435	1.59-.476	1.37-.476
6-DC-844	6-5¼x6½	844	180-1800	150-1800	96-1200	460-1100	2850	2.00-.540	1.87-.540
*6-DCS-844	6-5¼x6½	844	225-1800	185-1800	140-1400	530-1250	.....	2.00-.540	1.87-.540
6-DC-1125	8-5¼x6½	1125	239-1800	197-1800	148-1400	570-1100	.....	2.00-.540	1.87-.540
*8DCS-1125	8-5¼x6½	1125	300-1800	242-1800	184-1400	700-1250	.....	2.00-.540	1.87-.540
CONTINENTAL									
KD-6330	6-4x4⅜	330	82-2400†	.....	.....	197-1250	.....	.....	.....
TD-6427	6-4⅛x4⅞	427	112-2400†	.....	.....	255-1250	.....	.....	.....
RD-6572	6-4¾x5⅜	572	150-2200†	.....	.....	340-1250	.....	.....	.....
CUMMINS									
A	6-4x5	377	100-2200‡	85-2200‡	57-1600‡	275-1200	1830	1.37-.406	1.37-.406
H	4-4⅞x6	448	100-1800‡	83-1800	50-1200‡	340-800	1930	1.75-.500	1.75-.500
H	6-4⅞x6	672	150-1800‡	125-1800	85-1400‡	500-800	2540	1.75-.500	1.75-.500
*HS	6-4⅞x6	672	200-1800‡	175-1800	120-1400‡	625-1400	3000	1.75-.500	1.75-.500
NH-600	6-5½x6	743	200 2100	174-2100	135-1800	575-1400	2500	.....	.....
*NHS-600	6-5½x6	743	275-2100	240-2100	175-1800	710-1600	3520	.....	.....
GMC-General Motors Truck									
3-71	3-4¼x5	213	.....	100-2000‡	67-1600‡	300-1300	1735	No Valves	125-.385
4-71	4-4¼x5	284	.....	133-2000‡	89-1600‡	400-1300	1880	No Valves	125-.385
6-71	6-4¼x5	425	.....	200-2000‡	134-1600‡	600-1300	2470	No Valves	125-.385
HERCULES									
DJXB	6-3¼x4½	260	77-2600	66-2600	51-1800	179-1300	950	1.62-.375	1.12-.375
DJXC	6-3⅜x4½	298	83-2600	71 2600	59-1800	208-1300	950	1.62-.375	1.12-.375
DWXC	6-4x4¾	358	118-2600	100-2600	81-1800	284-1600	1350	1.68-.395	1.25-.395
DWXD	6-4¼x4¾	404	135-2600	115-2600	92-1800	320-1600	1350	1.68-.395	1.25-.395
DRXB	6-4⅜x5¼	474	132-2200	112 2200	89-1600	340-1200	1600	2.00-.395	1.37-.395
DRXC	6-4⅜x5¼	529	147-2200	125-2200	100-1600	395-1200	1600	2.00-.395	1.37-.395
DFXB	6-5x6	707	190-2100	162 2100	136-1600	530-1350	2500	2.37-.500	1.62-.500
DFXC	6-5¼x6	779	204-2100	173-2100	149-1600	585-1350	2500	2.37-.500	1.62-.500
DFXD	6-5¼x6	855	217-2100	184 2100	162-1600	645-1200	2500	2.37-.500	1.62-.500
DFXE	6-5½x6	895	228-2100	194-2100	170-1600	680-1200	2500	2.37-.500	1.62-.500
DFXH	6-5¾x6	935	260-2000	221-2000	187-1600	750-1200	2575	2.60-.500	1.90-.500
WAUKESHA									
140HS	6-4¼x5½	468	114-2250	95-2250	67-1500	342-1000	1510	1.87-.531	1.37-.469
140HK	6-4¼x5½	525	128-2250	109-2250	75-1500	383-1000	1550	1.87-.531	1.37-.469
145HK	6-5¼x6	779	174-2000	148-2000	106-1400	550-900	1865	1.87-.594	1.37-.531
6WAKH	6-6¼x6½	1197	202-1800	162-1600	139-1300	611-700	3200	2.37-.656	2.00-.656

ABBREVIATIONS:
*—Supercharged. †—Observed reading—not corrected. ‡—Without fan or muffler.

Gasoline and Diesel Engine Specifications

Useful data for figuring the most efficient operation of a vehicle over any kind of roads. For additional data see the article on Page 36.

AMA HORSEPOWER

(For License Purposes Only)

$$\text{AMA HP} = \frac{B \times B \times \text{No. of Cyl.}}{2.5}$$

B = Cylinder Bore
2.5 = Constant based on average engine in 1906

GRADE ABILITY

$$GA = \frac{TE}{GVW} \text{ minus } .012$$

GA = Grade Ability
TE = Tractive Effort
GVW = Gross Vehicle Weight
.012 = 12 lb. per 1000 lb., rolling resistance on hard-surfaced roads

TRACTIVE EFFORT

$$TE = \frac{\text{lb. in. Torque} \times FGR \times .90}{R}$$

R = Rolling Radius in Inches
FGR = Final Gear Ratio
lb. in. Torque = 12 times Torque in lb. ft.
.90 = Efficiency for all rear axles except worm, then .85

GASOLINE ENGINE SPECIFICATIONS

ENGINE MAKE AND MODEL	Number of Cylinders Bore and Stroke (in.)	MAX. BRAKE H.P. at R.P.M.		Piston Displacement (Cu. In.)	Compression Ratio	TORQUE	Engine Weight without Carburetor or Ignition (Lb.)
		With Bare Engine	With Standard Accessories			Maximum Torque at R.P.M. (Lb. Ft.)	
AUTOCAR							
377	6-4x5	119-2800	112-2800	377.0	5.85	292-1400 (BE)	1230
447	6-4 1/4x5 1/4	133-2500	122-2500	447.0	5.75	351-1100 (BE)	1385
501	6-4 1/2x5 1/4	145-2500	134-2500	501.0	5.75	395-950 (BE)	1395
BUDA							
K-393	6-4 1/8x4 3/4	101-2400	86-2400	393.0	4.80	216-1100 (EA)	905
K-428	6-4 3/8x4 3/4	107-2400	95-2400	428.0	5.33	296-1100 (EA)	905
L-525	6-4 1/2x5 1/2	110-2400	94-2400	525.0	4.75	287-800 (EA)	950
LO-525	6-4 1/2x5 1/2	157-2400	139-2400	525.0	5.00	396-1200 (EA)	1195
CHEVROLET							
1946	6-3 1/2x3 13/16	93-3100	83.5-3000	235.5	6.62	182-1000 (EA)	560
1946	6-3 1/2x3 3/4	90-3300	83-3200	216.5	6.50	168-1100 (EA)	554
CONTINENTAL							
F-6209	6-3 1/8x4 1/2	71-3200	.....	209.5	5.75	155-1200 (BE)	506
F-6226	6-3 1/8x4 1/2	76-3000	.....	226.0	6.00	170-1200 (BE)	512
M-6271	6-3 5/8x4 1/2	92-3000	.....	270.9	5.75	203-1200 (BE)	750
M-6290	6-3 3/4x4 1/2	99-3000	.....	289.9	5.70	218-1200 (BE)	760
M-6330	6-4x4 1/2	107-2800	.....	329.8	5.50	246-1000 (BE)	770
B-6371	6-4 1/4x4 1/2	109-2600	.....	370.9	5.74	280-1000 (BE)	855
B-6427	6-4 1/8x4 7/8	121-2500	.....	427.2	6.60	325-1200 (BE)	885
22R	6-4 1/2x5 1/4	141-2400	.....	501.0	4.50	385-1200 (BE)	1430
R6513	6-4 1/4x5 1/2	165-2600	.....	512.9	5.90	400-1200 (BE)	1250
R6572	6-4 3/4x5 1/2	175-2750	.....	571.7	5.90	436-1250 (BE)	1250
R6602	6-4 7/8x5 1/2	184-2600	.....	601.9	5.90	460-1200 (BE)	1250
DODGE							
T-112	6-3 1/4x4 1/2	90-3000	78-3000	217.8	6.80	172-1200 (BE)	500
T-116	6-3 1/4x4 5/8	105-3600	82-3000	230.2	6.70	184-2000 (BE)	525
T-137	6-3 1/4x4 5/8	94-3200	74-2800	230.2	6.70	185-1200 (BE)	525
T-118, T-123	6-3 7/8x4 1/4	104-3000	90-3000	236.6	6.60	190-1600 (BE)	560
T-120, T-130	6-3 7/8x4 1/2	109-3000	95-3000	250.6	6.60	200-1500 (BE)	570
FORD							
59	8-3 1/16x3 3/4	100-3800	89-3600	239.4	6.75	180-2000 (BE)	.....
GMC (General Motors Truck)							
228	6-3 7/8x3 13/16	95-3200	85-3000	228.0	6.75	178-1000 (EA)	.....
236	6-3 5/8x3 13/16	97-3200	87-3000	236.1	6.75	187-1000 (EA)	.....
248	6-3 13/16x3 13/16	100-3100	89-3000	248.5	6.75	195-1000 (EA)	.....
270	6-3 7/8x4	104-3000	95-3000	270.0	6.75	216-1000 (EA)	.....
308	6-3 7/8x4 1/2	111-2800	87-2800	308.2	6.00	239-800 (EA)	.....
361	6-4 1/4x4 1/2	122-2800	106-2500	360.8	6.00	285-800 (EA)	.....
426	6-4 1/4x5	145-2600	127-2400	425.6	6.00	322-1000 (EA)	.....
451	6-4 5/8x5	149-2600	130-2400	450.9	6.00	350-1000 (EA)	.....
477	6-4 1/2x5	153-2600	135-2400	477.1	6.00	365-1000 (EA)	.....
HERCULES							
QXB	6-3 1/4x4 1/2	65-3200	55-3200	205.0	6.50	143-1400 (BE)	440
QXC	6-3 5/8x4 1/2	80-3200	68-3200	221.0	6.50	165-1400 (BE)	440
QXD	6-3 7/8x4 5/8	86-3200	73-3200	230.0	6.50	180-1400 (BE)	440
QXLD	6-3 7/8x4 3/4	91-3200	77-3200	236.7	6.50	189-1400 (BE)	445
JXE	6-3 1/4x4 3/4	94-3200	80-3200	245.0	6.80	175-1500 (BE)	590
JXB	6-3 5/8x4 1/4	98-3400	83-3400	263.0	6.50	191-1400 (BE)	605
JXC	6-3 5/8x4 1/4	103-3200	87.5-3200	282.0	6.50	207-1400 (BE)	605
JXD	6-4x4 1/4	113-3000	96-3000	320.0	6.50	243-1200 (BE)	605
JXLD	6-4x4 1/2	131-3200	111-3200	339.0	6.90	272-1400 (BE)	630
WXC-3	6-4 1/4x4 1/2	131-2600	111-2600	383.0	6.60	296-1400 (BE)	820
WXLC	6-4x4 3/4	123-2600	104-2600	358.0	6.60	284-1300 (BE)	811
WXLC-3	6-4 1/4x4 3/4	139-2600	118-2600	404.0	6.60	312-1300 (BE)	825
RXB	6-4 1/4x5 1/4	137-2400	116-2400	501.0	6.50	350-1200 (BE)	1000
RXC	6-4 5/8x5 1/4	143-2400	121-2400	529.2	6.00	372-1200 (BE)	1010
RXLC	6-4 5/8x5 1/4	146-2400	124-2400	529.2	6.20	405-1100 (BE)	1195
RXLD	6-4 3/4x5 1/4	154-2400	131-2400	558.0	6.20	430-1100 (BE)	1195
HXB	6-5x6	159-2000	135-2000	707.0	5.75	502-900 (BE)	1810
HXC	6-5 1/4x6	177-2100	150-2100	779.0	5.69	550-1000 (BE)	1810
HXD	6-5 1/2x6	202-2000	172-2000	855.0	5.50	645-900 (BE)	1830
HXE	6-5 3/4x6	227-2000	193-2000	935.0	6.20	750-1000 (BE)	1830
INTERNAT'L							
GRD-214	3-3 1/4x4 1/2	82-3400	73-3200	213.2	6.30	160-1200 (BE)	536
GRD-233	6-3 1/4x4 1/2	93-3400	80-3400	232.6	6.30	176-800 (EA)	624*
BLD-250	6-3 7/8x4 1/2	100-3200	84-3000	250.0	6 30	200 2000 (EA)	875*
BLD-269	6-3 7/8x4 1/2	100-3000	89-2800	269.1	6.30	216-1000 (EA)	874*
RED-361	6-4 1/4x4 1/2	126-3000	112-2800	361.0	6.30	278-1000 (EA)	956
RED-401	6-4 1/4x5	140-2800	126-2800	401 0	6 30	318-1200 (EA)	1090*
RED-450	6-4 5/8x5	148-2600	133-2600	451.0	6.30	348-1000 (EA)	1076
REO							
GC-245	6-3 1/2x4 1/4	89-3100	.....	245.0	6.20	191-1000 (BE)	763*
GC-288	6-3 1/4x5	94-3000	.....	288.0	6.20	221-1200 (BE)	780*
GC-310	6-3 5/8x5	101-3000	.....	310.0	6.20	241-900 (BE)	785*
WAUKESHA							
6BZ	6-4x4 1/4	86-2800	65-2000	320.0	5.75	210-1000 (BE)	706
6MZR	6-4 1/4x4 3/4	106-2500	69-1600	404.0	5.38	286-800 (BE)	920
6MZA	6-4 1/4x4 3/4	123-2500	72-1600	404.0	5.90	290-1200 (BE)	920
140-GS	6-4 1/4x5 1/2	122-2250	114-2250	468.0	5.80	362-1000 (BE)	1350
6SRKR	6-4 5/8x5 1/2	125-2250	120-2250	517.0	5.50	369-600 (BE)	1225
140-GK	6-4 1/4x5 1/2	142-2250	133-2250	525.0	5.80	403-1000 (BE)	1390
145-GK	6-5 1/4x6	186-2000	177-2000	779.0	5.60	590-1200 (BE)	1810
145GZ	6-5 3/4x6	203-2000	194-2000	817.0	6.00	585-1400 (BE)	1810
6WAK	6-6 1/4x6 1/2	235-1800	193-1300	1197.0	5.20	865-900 (BE)	3050
WHITE							
100A	6-3 7/8x4 1/2	90-2800	.....	250.0	6.75	185-1200 (BE)	982
120A	6-3 7/8x4 1/2	110-2600	.....	318.0	6.40	285-1200 (BE)	1003
140A	6-3 7/8x5 1/8	125-2600	.....	362.0	6.28	285-1100 (BE)	1060
WILLYS							
CJ-2A	4-3 1/8x4 5/8	63-3900	.....	134.2	6.48	108-1800 (BE)	364

ABBREVIATIONS:

*—Weight with ignition and carburetor

†—Rated with generator and water pump, but no fan or muffler

(BE)—Bare Engine
(EA)—With Standard Accessories

Italic figure, thus (30) denotes limit now effective by proclamation or order of the Governor or other State Official.

STATE SIZE AND

STATE	SIZE RESTRICTIONS (K)							GROSS WEIGHT (LEGAL LIMITS)		(See NOTE) PRACTICAL GROSS WEIGHT LIMITS (K) (In thousands of pounds) (Where No Distinction is Made Between Pneumatic and Solid Tire Limits, Below Limits Apply to Both)											
	Width (Inches)	Height (Feet)	LENGTH: Single Unit	LENGTH: Tractor Semi-Trailer	LENGTH: Other Combinations	Number of Trailers (Semi-Trailer = ½)	Minimum Tandem Axle Spacing	Per Inch of Tire Width	Per Axle (1000 lb.)	4-Wheel Single Unit	6-Wheel Single Unit	4-Wh. Tractor 2-Wh. Semi-T.	4-Wh. Tractor 4-Wh. Semi-T.	6-Wh. Tractor 4-Wh. Semi-T.	4-Wh. Truck 4-Wh. Trailer	4-Wh. Truck 6-Wh. Trailer	6-Wh. Truck 4-Wh. Trailer	6-Wh. Truck 6-Wh. Trailer	4-Wh. Tractor 2-Wh. Semi-T. 4-Wh. Trailer	4-Wh. Tractor 4-Wh. Semi-T. 4-Wh. Trailer	6-Wh. Tractor 4-Wh. Semi-T. 6-Wh. Trailer
Ala. TVX	96	12½	35	45	NP	½	NS	600	18 l	46.9	46.9	53.9	53.9	53.9	NP	NP	NP	NP	NP	NP	NP
Ariz.	102	13½	35	65	65	1½	NS	700	18	36	53.6	77.6	77.6	77.6	77.6	77.6	77.6	77.6	77.6	77.6	77.6
Ark. VXZ	96	12½	35	45	45	1 or ½	40	Table	18	36	46.9-IW	53.9-IW	53.9-IW	53.9-IW	53.9-IW	53.9-IW	53.9-IW	53.9-IW	NP	NP	NP
Cal. XZ	96	13½	35	60	60	NR	NS	NS-P 600-S	18	36	53.6	73.6	73.6	73.6	73.6	73.6	73.6	73.6	73.6	73.6	73.6
Colo. X	96 102 b	12½	35	60	60	2	40	NS-P 500-S	18-I 16-J	30	69	69	69	69	69	69	69	69	69	69	69
Conn. TZ	96 c 102	12½	40	40	NP	½	NS	NS-P 800-S	NS(Z)	32-P 26-S	40	40	40	40	NP	NP	NP	NP	NP	NP	NP
Del. Z	96	12½	35	60	60	1½	NS	*40* 700	18-P 16-S	*30* 26	*40* 36	40	40	40	52-P 44-S	52-P 44-S	62-P 44-S	62-P 44-S	62-P 60-S	62-P 60-S	62-P 60-S
D. C. VZ	106 a 96	12½	35	50	50	NR	NS	NS	18	30	40	40	40	40	40	40	40	40	NP	NP	NP
Fla. Z	84	*12½* 12½	35	50	50	1 or ½	NS	*600* 550	18Q	24Q	40Q	40Q	60	60	60	60	60	60	NP	NP	NP
Ga. X	96	13½	35	45	45	1 or ½	40	NS	18-I 16-J	36	46.9	53.9	53.9	53.9	53.9	53.9	53.9	53.9	53.9	53.9	53.9
Idaho V³	96	14	35	45	65	1½	NS	800 [g]	18	28	42	42	56	60	56	68	68	68	68	68	68
Illinois TV¹z	96	NS	42	45	45	1½	40	800	16	24 E	41	45	59	59	63	63	72	72	72	72	72
Indiana X	96	*12½* 12	36	*45* 40	*45* 40	1½	40	800	18	36	*51* 47.6	*57.7* 53.9	*57.7* 53.9	*57.7* 53.9	*57.7* 53.9	*57.7* 53.9	*57.7* 53.9	*57.7* 53.9	*57.7* 53 9	*57 7* 53.9	*57.7* 53.9
Iowa TX	96	*12½* 12	*35* 33	45	NP	½	40	NS	*18* 17	42.2	42.2	57.7	57.7	57 7	NP	NP	NP	NP	NP	NP	NP
Kansas X	96	12½	35	45	45	1 or ½	40	NS	18-I 16-J	24 28 t	34	46.9	46.9	46.9	48	58	58	63	NP	NP	NP
Ky. TZ	96	12½	26½	33	NP	½	NS	600	16	*30* 28	*40* 28	*40* 28	*40* 28	*40* 28	NP	NP	NP	NP	NP	NP	NP
La. Z	96	12½	35	45	45	1 or ½	40	Table	18-I 16-J	18	36	36	50	64	54	NP	68	NP	NP	NP	NP
Maine	96	12½	*45* 40 h	*45* 40 h	*45* 40 h	1 or ½	NS	600	22-G	30	40	40	40	40	40	40	40	40	NP	NP	NP
Md. X	96	NR	55	55	55	NR	NS	600	22.4 18-e	44.8	58.4	65.2	65.2	65.2	65.2	65.2	65.2	65.2	65.2	65.2	65.2
Mass.	96 102 b	NR	33 35 j	40	NS	T 1 or ½	NS	800	NR	30-P 28-S	40	40	40	40	*41* 31	*41* 31	41	41	NP	NP	NP
Mich. p	96 102 b	12½	35	50	50	1½	NS	Table	18-P 16-S	36-PW 32-S	44-PW 39.2-S	54-PW 48-S	62-PW 55.2-S	70-PW 62.4-S	72-PW 64-S	80-PW 71.2-S	80-PW 71.2-S	88-PW 78.4-S	90-PW 80-S	98-PW 87.2-S	114-PW 101.6-S
Minn. TZX	96	12½	40	45	45	1 or ½	NS	NR	18-P u 10.8-S	36	46.8 28	57.7 34.6	57.7 34.6	57.7 34.6	57.7 34.6	57.7 34.6	57.7 34.6	57.7 34.6	NP	NP	NP
Miss.	96	12½	35	45	45	1 or ½	40	NS	18-I 16-J	36	*45*	*45*	*45*	*45*	*45*	*45*	*45*	*45*	NP	NP	NP
Mo. ZX	96	12½	35	45	45	NR	NS	600	18	46.9	46.9	53.9	53.9	53.9	53.9	53.9	53.9	53.9	NP	NP	NP
Mont. XV¹	96	13½	35	60	60	1 or ½	NS	NS	18-P 16-S	36-P 32-S	46.9	69	69	69	69	69	69	69	NP	NP	NP
Neb. TX	96	*12½* 12	35	42	45	1½	NS	NS	*18* 16	36	43.5	*55.5* 40	*55.5* 40	*55.5* 40	*57.7* 48	*57.7* 48	*57.7* 48	*57.7* 48	*57.7* 48	*57.7* 48	*57.7* 48
Nev.	NR	NR	NR	NR	NR	NR	42	600	NR	25	38	38	38	38	50	63	63	75	63	63	76
N. H.	96	NR	33	45	45	NR	NS	800	18	30	40	40	40	40	40	40	40	40	40	40	40
N. J.	96	12½	35	45	50	1 or ½	NS	Table	Table	30	40	60	60	60	60	60	60	60	NP	NP	NP
N. M. V¹X	96 100 b	12½	35	60	60	1 or ½	40	700-P 500-S	18	36	50.2	69	69	69	69	69	69	69	NP	NP	NP
N. Y. X	96 106 b	13	35	50	50	1 or ½	46	800-P 640-S	22.4-P 17.9-S	36-P 28.8-S	44-P 35.2-S	61.5-P 49.2-S	61.5-P 49.2-S	61.5-P 49.2-S	61.5-P 49.2-S	61.5-P 49.2-S	61.5-P 49.2-S	61.5-P 49.2-S	NP	NP	NP
N. C.	96	12½	35	48i	48i	1 or ½	48	600	18-I 16-J	26 L	40	40	50	50	50	50	50	50	NP	NP	NP

WEIGHT LIMITS

Italic figure, thus (30) denotes limit now effective by proclamation or order of the Governor or other State Official.

STATE	SIZE RESTRICTIONS (K)							GROSS WEIGHT (LEGAL LIMITS)		PRACTICAL GROSS WEIGHT LIMITS (K) (In thousands of pounds) (Where No Distinction is Made Between Pneumatic and Solid Tire Limits, Below Limits Apply to Both)											
	Width (Inches)	Height (Feet)	LENGTH: Single Unit	LENGTH: Tractor Semi-Trailer	LENGTH: Other Combinations	Number of Trailers (Semi-Trailer = ½)	Minimum Tandem Axle Spacing	Per Inch of Tire Width	Per Axle (1000 lb.)	4-Wheel Single Unit	6-Wheel Single Unit	4-Wh. Tractor 2-Wh. Semi-T.	4-Wh. Tractor 4-Wh. Semi-T.	6-Wh. Tractor 4-Wh. Semi-T.	4-Wh. Truck 4-Wh. Trailer	4-Wh. Truck 6-Wh. Trailer	6-Wh. Truck 4-Wh. Trailer	6-Wh. Truck 6-Wh. Trailer	4-Wh. Tractor 2-Wh. Semi-T. 4-Wh. Trailer	4-Wh. Tractor 4-Wh. Semi-T. 4-Wh. Trailer	6-Wh. Tractor 4-Wh. Semi-T. 6-Wh. Trailer
TX N. D.	96	12½	35	45	45	1 or ½	40	550	18 14-f	36	43.5	57.7	57.7	57.7	57.7	57.7	57.7	57.7	NP	NP	NP
XZ Ohio	96	12½	35	45	60	NR	NS	650	18-P 16-S	36-P 32-S	50.2-P 40.2-S	57.7-P 46.2-S	57.7-P 46.2-S	57.7-P 46.2-S	69-P 55.2-S	69-P 55.2-S	69-P 55.2-S	69-P 55.2-S	69-P 55.2-S	69-P 55.2-S	69-P 55.2-S
Okla.	96	12½	45	45	45	1½	NS	600	NS	24	24	47	47	47	47	47	47	47	47	47	47
VXZ Ore.	96	*12½* 11	35	50	*60* 50	NR	40	600 q	18 w 16 x	*36* 34	46.9 w 46.9 x	*69* 54	*69* 54	*69* 54	*69* 54	*69* 54	*69* 54	*69* 54	*69* 54	*69* 54	*69* 54
Z Pa.	96	12½	33	45	50	1 or ½	36	800	20	30 H	40 H	45	45	45	60	65	65	65	NP	NP	NP
R. I.	102	12½	35	45	45	1 or ½	NS	800	22.4	32-P 28-S	40	*55* 46	*55* 46	*55* 46	64-P 56-S	72-P 68-S	72-P 68-S	80	NP	NP	NP
X S. C.	96	12½	40	50	50	1 or ½	40	NR	18-I 18-J	32	40	50	50	50	50	50	50	50	NP	NP	NP
X S. D.	96	13	35	45	45	1 or ½	40	600	18-I 16-J	30	30	40	40	40	40	40	40	40	NP	NP	NP
Tenn.	96	12½	35	45	45	1 or ½	40	NS	18	36	42	42	42	42	42	42	42	42	NP	NP	NP
X Tex.	96	12½	35	45	45	1 or ½	40	650-I 600-J	18-I 16-J	36	48	48	48	48	48	48	48	48	NP	NP	NP
XZ Utah	96	14½	45	60	60	1 or ½	NS	800 o	18-P 13.5-S	36-P 27-SW	53.9-P 40.4-S	64.4-P 48.3-S	64.4-P 48.3-S	64.4-P 48.3-S	64.4-P 48.3-S	64.4-P 48.3-S	64.4 48.3-S	64.4-P 48.3-S	NP	NP	NP
Z Vt.	96	12½	50	50	50	1 or ½	40	600	NR	*30* M 16	40 M 16	40 M 16	40 M 16	40 M 16	40 M 16	40 M 16	40 M 16	40 M 16	NP	NP	NP
VZ Va.	96	12½	33 g	45	45	1 or ½	40	650	*18* 16	*32* 24	*40* 35	*40* 35	*40* 35	*40* 35	*40* 35	*40* 35	*40* 35	*40* 35	NP	NP	NP
X Wash.	96	12½	35	60	60	1 or ½	NS	500	18	36	40	69	69	69	69	69	69	69	NP	NP	NP
WXZ W. Va.	96	12½	35	45	45	NR	40	NS	18-PB 14-SB	36-PWB 28-SB	54-PWB 42-SB	54-PWB 42-SB	72-PWB 56-SB	90-PWB 70-SB	72-PWB 56-SB	90-PWB 70-SB	90-PWB 70-SB	102.4PB 81.9-SB	90-PWB 70-SB	102.4PB 81.9-SB	102.4PB 81.9-SB
VZ Wisc.	96 d	12½	35	45	45	1 or ½	40	800	19-C 12-D	30-Ck 15-D	53-C 32-D	63-C 38-D	60-C 30-D	70-C 37.5-D	60-C 30-D	70-C 37.5-D	70-C 37.5-D	72-C 45-D	NP	NP	NP
X Wyo.	96	12½	40	50	60	2	NS	800	18-I 16-J	36	52.7	61.2	61.2	61.2	69.7	69.7	69.7	69.7	69.7	69.7	69.7

Italic figures denote limit effective by proclamation or order of Governor or other Official.

||—See Note at right.

a—If registered before 1932.

b—At rear tires, when solids changed to pneumatics.

c—Regulated "for hire" vehicles.

d—104 inches for urban buses.

e—If less than 50 inches apart

f—If less than 8 feet apart

g—Buses allowed 35 ft. length.

h—Trailers are limited to 26 ft.

o—Graduated according to tire width.

p—13,000 lbs. on tandem axles 3 ft. 6 in. apart; applies June 1 to Feb. 28; differs with season.

q—500 lbs. when total tires under 30 inches wide.

t—Dual tires 8 in. wide or over.

u—12,000 lbs. when axles spaced under 8 feet apart.

w—Permissible weight on paved highways.

x—Permi-sible weight on unpaved highways.

z—City of Clinton, Ill., limits truck gross weight to 12,000 lbs.

B—In "Industrial Areas"—varies for different "areas."

C—Permissible on "Class A" highways.

D—Permissible on "Class B" highways.

G—Axles less than 10 ft. apart limited to 16,000 lbs.

H—Maximum shown — gross depends on chassis weight.

I—Permissible on balloon tires.

J—Permissible on other than balloon tires.

K—May exceed on designated highways with permit.

L—Buses permitted 22,500 maximum net weight.

M—On State highways.

N—40,000 lbs. with pneumatic tires, 3 axles, 2 hubs and brakes on each hub.

NP—Not permitted.

NR—No restriction.

NS—Not specified.

P—Pneumatic tires.

PL—Pay load.

Q—If equipped with power brakes.

S—Solid tires.

T—With the following exceptions full trailers are permitted the same gross weight as other single units:—

Ala., Iowa, Conn., Ky.—Full trailers prohibited.

Ill—All trailers limited to 32,000 lbs. gross.

Mass.—Trailers limited to 1,000 lbs. capacity.

Nebr.—All trailers limited to 16,000 lbs. gross.

N. Dak.—Trailers, 35,000 lbs.

Weight of trailers is limited by axle limitations and formula. In states determining gross weight by formula.

Table—There is a table of axle weights based upon tire widths.

V—Solid tires prohibited.

V1—Solid tires prohibited except on property carrying vehicles operating 10 mph or less.

V2—Solid tires limited to 20 miles per hour under 10,000 lbs., and to 12 mph over 10,000 lbs.

W—See Note above.

W1—Maximum gross when all axles carry maximum load—See "Note" above.

X—States where gross weight is determined by formula (See State under "Bridge Formulas" in next column and formula computations on next page).

Z—See "Restrictions Peculiar to Certain States" on next page.

NOTE ON "W" AND SHADED SQUARES

Except when shown in squares shaded with parallel lines or when followed by the letter "W," the above gross weight limits are the limits fixed by state law.

When shown in shaded squares the above limits are computations made by the National Highway Users Conference to show what it considers to be practical gross weights where gross weights are arrived at by application of one of the formulae shown below under Footnote "X." In making these computations, wheel base was arrived at by deducting 8 ft. total over-hang front and rear from permissible overall length of unit or combination; tandem axles were considered to be a minimum permissible distance apart: H-20 bridge formula was used in West Virginia. When actual over-hang is less than 8 ft. additional gross weight will be possible.

When followed by the letter "W," the limits shown are maximum possible weights where gross weight is determined by permissible axle weight. These limits are possible only when each axle carries a gross weight equal to the permissible axle limit as shown.

BRIDGE FORMULAS

Ala.—700 (L plus 40) on any unit or combination.

Ariz.—800 (L plus 40) new vehicles; 850 (L plus 40) vehicles registered before June 9, 1945 until Jan. 1, 1955; 700 (L plus 40) new vehicles with axle spacing 18 feet or less; 750 (L plus 40) vehicles registered before June 9, 1945 until Jan. 1, 1955, axle spacing between 14 and 18 feet.

Ark.—650-700 (L plus 40) two or more consecutive axles and any unit or combination.

Cal.—800 (L plus 40) applies to vehicles and combinations first registered on or after Jan. 1, 1942, if total wheel base exceeds 18 feet; 700 (L plus 40) applies to vehicles and combinations if axle spacing 18 feet or less, first registered on or after Jan. 1, 1942; 850 (L plus 40) or 68,000 lbs. maximum, if total wheel base is between 25 and 45 feet, inclusive, for vehicles and combinations first registered prior to Jan. 1, 1942; terminates Jan. 1, 1952. 800 (L plus 40) if axle spacing of two or more axles is between 14 and 18 feet, inclusive, for vehicles and combinations first registered prior to Jan. 1, 1942; terminates Jan. 1, 1952.

Cal.—Table published is based on 700 (L plus 40) if axles spaced 18 feet or less, 800 (L plus 40) if over 18 feet.

Colo.—750 (L plus 40).

Ga.—Same as Ala.

Ind.—750 (L plus 40) two or more consecutive axles and any unit or combination.

Iowa—28,000 (L plus 800).

Kans.—700 (L plus 40) only applies to combinations.

Md.—750 (L plus 40) any unit or combination.

Minn.—750 (L plus 40).

Mont.—650 (L plus 40) for axle spacing to 20 ft. and 750 (L plus 40) above 20 ft.

Nebr.—Same as Md.

N.M.—750 (L plus 40) two or more consecutive axles and any unit or combination.

N. Y.—750 (L plus 40) three or more consecutive axles and any unit or combination.

N. Dak.—750 (L plus 40) any unit or combination.

Ohio—750 (L plus 40) 3 or more axles.

Ore.—Same as Ala.

S. C.—700 (L plus 40).

S. D.—600 (L plus 40) any unit or combination

Tenn.—Same as Ala.

Texas—Same as Ala.

Utah—Same as Ala.

Wash.—750 (L plus 40) any unit or combination if axle spacing over 18 feet; 650 (L plus 40) if axle spacing 18 feet or less.

W. Va.—1230-1000-670 (L plus 40) apply to highways dependent on bridge types thereon.

Wyo.—850 (L plus 30) any unit or combination if axle spacing over 18 feet; 650 (L plus 40) if axle spacing 18 ft. or less.

NATIONAL HIGHWAY USERS CONFERENCE, National Press Bldg., Washington, D. C.

Corrected to April 10, 1946, Copyright 1946

GROSS WEIGHTS COMPUTED BY FORMULAS

Computation of Gross Weights according to formulas, based on distance (in feet) between first and last axles, for States identified by State Size & Weight Limits chart by Footnote "X." It should be remembered that the figures in each column represent only a mathematical extension and are governed by Legal Overall Length Limits for single units and combinations of particular states. Also, that formula computations are superseded in some instances by specific limits given in the chart.

"L" (See Note Below)	South Dakota	Arkansas[1] Minnesota[5] Montana[3] Nebraska[5] North Dakota[5] Washington[5]	West Virginia (H-10 Bridges)	Ala., Ariz.[9], Ark.[2] Calif., Georgia Iowa, Kansas N. Car., S. Car. Tenn., Texas, Utah	Ariz.[10], Colo., Ind. Minn., Mont.[4] Neb., N. Mex. N. Y., N. Dak. Ohio, Ore., Wash.	West Virginia (H-15 Bridges)	West Virginia (H-20 Bridges)	Arizona California	Arizona[11]	Wyoming
	600 (L + 40)	650 (L + 40)	670 (L + 40)	700 (L + 40)	750 (L + 40)[6]	1000 (L + 40)	1330 (L + 40)	800 (L + 40)	850 (L + 40)	850 (L + 30)
10 ft.	30000 lb.	32500 lb.	33500 lb.	35000 lb.	37500 lb.	50000 lb.	66500 lb.	..... lb.	..... lb.	..... lb.
11	30600	33150	34170	35700	38250	51000	67830	.....	.....	.....
12	31200	33800	34840	36400	39000	52000	69160	.....	.....	.....
13	31800	34450	35510	37100	39750	53000	70490	.....	.....	.....
14	32400	35100	36180	37800	40500	54000	71820	43200	.....	37400
15	33000	35750	36850	38500	41250	55000	73150	44000	.....	38250
16	33600	36400	37520	39200	42000	56000	74480	44800	.....	39100
17	34200	37050	38190	39900	42750	57000	75810	45600	.....	39950
18	34800	37700	38860	40600	43500	58000	77140	46400	.....	40800
19	35400	38350	39530	41300	44250	59000	78470	47200	.....	41650
20	36000	39000	40200	42000	45000	60000	79800	48000	.....	42500
21	36600	39650	40870	42700	45750	61000	81130	48800	.....	43350
22	37200	40300	41540	43400	46500	62000	82460	49600	.....	44200
23	37800	40950	42210	44100	47250	63000	83790	50400	.....	45050
24	38400	41600	42880	44800	48000	64000	85120	51200	.....	45900
25	39000	42250	43550	45500	48750	65000	86450	52000	55250	46750
26	39600	42900	44220	46200	49500	66000	87780	52800	56100	47600
27	40200	43550	44890	46900	50250	67000	89110	53600	56950	48450
28	40800	44200	45560	47600	51000	68000	90440	54400	57800	49300
29	41400	44850	46230	48300	51750	69000	91770	55200	58650	50150
30	42000	45500	46900	49000	52500	70000	93100	56000	59500	51000
31	42600	46150	47570	49700	53250	71000	94430	56800	60350	51850
32	43200	46800	48240	50400	54000	72000	95760	57600	61200	52700
33	43800	47450	48910	51100	54750	73000	97090	58400	62050	53550
34	44400	48100	49580	51800	55500	74000	98420	59200	62900	54400
35	45000	48750	50250	52500	56250	75000	99750	60000	63750	55250
36	45600	49400	50920	53200	57000	76000	101080	60800	64600	56100
37	46200	50050	51590	53900	57750	77000	102410	61600	65450	56950
38	46800	50700	52260	54600	58500	78000	103740	63400	66300	57800
39	47400	51350	52930	55300	59250	79000	105070	63200	67150	58650
40	48000	52000	53600	56000	60000	80000	106400	64000	.....	59500
41	48600	52650	54270	56700	60750	81000	107730	64800	.....	60350
42	49200	53300	54940	57400	61500	82000	109060	65600	.....	61200
43	49800	53950	55610	58100	62250	83000	110390	66400	.....	62050
44	50400	54600	56280	58800	63000	84000	111720	67200	.....	62900
45	51000	55250	56950	59500	63750	85000	113050	68000	.....	63750
46	.....	55900	.....	60200	64500	.....	.....	68800	.....	64600
47	.....	56550	.....	60900	65250	.....	.....	69600	.....	65450
48	.....	57200	.....	61600	66000	.....	.....	70400	.....	66300
49	.....	57850	.....	62300	66750	.....	.....	71200	.....	67150
50	.....	58500	.....	63000	67500	.....	.....	72000	.....	68000
51	.....	59150	.....	63700	68250	.....	.....	72800	.....	68850
52	.....	59800	.....	64400	69000	.....	.....	73600	.....	69700
53	.....	60450	.....	65100	69750	.....	.....	74400	.....	70550
54	.....	61100	.....	65800	70500	.....	.....	75200	.....	71400

"L"—distance in feet between first and last axles of group of axles considered.

[1]—Arkansas vehicles with axles spaced not more than 7 ft. apart.

[2]—Arkansas vehicles with axles spaced over 7 ft. apart.

[3]—Montana vehicles with axles spaced not more than 20 ft. apart.

[4]—Montana vehicles with axles spaced over 20 ft. apart.

[5]—Vehicles with axles spaced 18 ft. or less.

[6]—In Arizona this applies (up to 18 feet) to any two or more axles on any vehicle or combination which was first registered on or after June 9, 1945.

—This applies to any vehicle or combination, which was first registered prior to June 9, 1945, having a group of two or more axles, where the distance between the first and last axles of the group is between 14 and 18 ft., inclusive.

[11]—This applies to any vehicle or combination first registered prior to June 9, 1945, where the total wheel base is between 25 and 45 ft., inclusive.

RESTRICTIONS PECULIAR TO CERTAIN STATES

ARK..... Maximum gross weights subject to maximum capacity based on tire sizes. Tolerance of 7½ per cent is allowed above allowances listed per tire sizes shown in Table (NHUC Size & Weight Book), but maximum axle weight is limited to 16,000 lbs. Vehicle weight allowances shown in State Size & Weight Limits chart are calculated on the basis of 8,000 lbs. on the front axle and 16,000 lbs. on all others. Single unit buses allowed axle weight of 17,600 lbs. if equipped with dual mounted low pressure tires not less in size than 10.50 x 22 in.

CONN... Not more than 80 per cent of vehicle gross on any one axle.

DELA.... 2,000 lbs. additional allowed on three-axled trucks with pneumatic tires and two hubs and brakes on each hub.

D. C..... Solid tires, when permitted, allowed 10 per cent less than pneumatics.

KY..... Trucks and tractor-semi-trailers permitted 16,000 lbs. per axle, 28,000 lbs. gross weight and 33 feet length (tractor-semi-trailers) during National Emergency.

MO..... Special size and weight limitations apply in cities of 75,000 population or over.

ORE..... Highway Commission authorized length of 60 feet and gross weight of 68,000 lbs. for civilian cargoes as well as Army and Navy goods. The greatest allowances shown in State Size & Weight Limit chart are permitted on paved highways, and the lowest allowances are the maxima permitted on unpaved highways.

PA..... Six-wheelers must have minimum axle spacing of 36 in. between the two rear axles. Buses operating within municipalities exempted from 18,000 lbs. axle and 26,000 lbs. gross limits.

UTAH... Gross weight also limited to three times unladen weight.

VT..... The greatest allowances shown in State Size & Weight Limit chart are permitted on state highways, medium allowances are the maxima permitted on state-aid highways, and the lowest allowances are the maxima permitted on other highways.

VA..... Two-axled vehicles with six-wheels permitted 32,000 lbs. gross.

W.VA.... No unit may carry a load more than 100 per cent greater than its registered capacity if registered for not over two tons; or more than 50 per cent greater if registered for over two but not over four tons; or more than 25 per cent greater if registered for over four tons.

SAFETY EQUIPMENT REGULATIONS

STATE & ICC, COVERING BRAKES DIRECTIONAL SIGNALS, FLARES & FUSEES

KEY TO SYMBOLS

(State Commission Rulings Are Given in Italics)

Corrected to March 15, 1946; Copyright, 1946

GENERAL

B—Buses
CMV—Commercial Motor Vehicles
Comb—Combinations
MC—Motor Carriers
MV—Motor Vehicles
NS—Not Specified
PS—Public Service
SemiT—Semi-Trailer
T—Truck
Trl—Trailer
TTr—Truck-tractor

BRAKES

A—"Adequate"; "sufficient to control"; "good and sufficient"; "efficient"; "serviceable."

C—"Adequate to control the movement of and to stop and to hold such vehicle, including two seperate means of applying the brakes."

D—Brakes operated by driver.

(1)—So constructed if unit becomes disconnected brakes lock automatically.

(2)—Brakes required on every wheel.

(3)—Brakes required on every wheel of new vehicles except light weight semitrailers.

(4)—Brakes required on every wheel of new vehicles except light weight trailers and semitrailers.

(4a)—Required on every wheel of new trailers and semi-trailers. On new vehicles acquired after Jan. 1, 1940, brakes are required on all wheels except full trailers, semi-trailers, and pole trailers having gross weight of 3000 lbs. or less; provided the gross weight of full trailers and 4 wheel pole trailers without brakes does not exceed 40% of the gross weight of the towing vehicle, and the gross weight of semi-trailers and 2 wheel pole trailers without brakes does not exceed 40% of the gross weight of the towing vehicle when connected thereto.

(5)—Air power or vacuum booster brakes (or electric in Fla. and Mich. and Wis.).

(6)—Buses over 10 seats.

*****—Where no designation of the specific class (i.e., trailer or semitrailer) is made, both classes must be understood if full trailer is permitted to be used under State law.

DIRECTIONAL SIGNALS

DD—When so loaded or constructed as to make hand signal invisible.

STATE	BRAKES		FLARES AND FUSEES (or similar devices)		DIRECTIONAL SIGNALS	
	Special Provisions For Trailers and Semi-Trailers					
	Applicable To *	Type Required	Must Be Used By	Number	Required	Must Be Approved
I. C. C.	*Over 3000 lb. gross*	(1)A(4a)	*B, T, TTr*	*3*	*No*	*No*
Ala.	—	—	B, T, CMV	2	Yes DD	Yes
Ariz.	*Trailers*	*(5)D*	*MC*	*3*	Yes DD	Yes
Ark.	Over 1500 lbs. gross	(3)A	T	2	Yes DD	Yes
Calif.	Over 6000 lb. gr. over 20 m.p.h.	A	T over 2 Tons net, TTr	2	Yes DD	Yes
Colo.	Over 3000 lb. gross	(4)A(1)D	T, B	3	Yes DD	Yes
Conn.	Over 4000 lb. cap. or light weight	AD	PSMV, CMV ov. 1t Comb	NS	Yes DD	Yes
Del.	Over 4000 lb. gr. over 10 m.p.h.	AD	T over 80 in. wide	3	Yes DD	Yes
D. C.	3000 lbs. or 40% Tractor Wt.	AD	—	—	Yes DD	Yes
Fla.	Over 3000 lbs. gross	(5)A(1)D	T, B, TTr	3	Yes DD	No
Ga.	2 axled Trl	A(5)D	T	3	No	No
Idaho	Over 1500 lb. net wt.	*A(4)*	*B, T, TTr*	*3*	Yes DD	Yes
Ill.	Over 3000 lb. gross	(4)A(1)D	CMV, (6)	3	Yes DD	Yes
Ind.	Over 3000 lb. gross	(3)A(1)D	T, B, TTr	3	Yes DD	Yes
Iowa	Over 3000 lb. gross	(4)A(1)D	T, TTr	3	No	No
Kans.	—	—	*MC/T*	3	No	No
Ky.	Semi-Trailers	AD	T	3	No	No
La.	Over 1500 lb. net weight	(2)D	T, B, Comb	3	Yes DD	Yes
Maine	*Trailers, 2 Tons or more cap.*	A	*MC*	*3*	No	No
Md.	3000 lb. or over gross	(1)CD(3)	CMV over 8500 lbs. gross	3	Yes DD	Yes
Mass.	—	—	CMV over 5000 lbs. gross	3	Yes DD	Yes
Mich.	Over 3000 lb. gross	(3)(5)A(1)D	*MC*	*3*	Yes DD	Yes
Minn.	Over 1500 lb. gross	(3)AL	T, B, TTr	3	Yes DD	Yes
Miss.	Trailers over 1 Ton capacity	A(1)D(4)	T, B	NS	Yes DD	Yes
Mo.	—	—	—	—	Yes DD	Yes
Mont.	—	—	B or T	2	No	No
Nebr.	—	—	T, B, Comb	3	Yes DD	Yes
Nev.	Over 3000 lb. gross	(1)(3)AD	—	—	No	No
N. H.	Over 3000 lb. gross	A	T, TTr, B	2	No	No
N. J.	Over 3000 lb. gross	A(1)(4)	CMV over 2½ Ton (6)	3	Yes DD	Yes
N. M.	Over 1500 lb. (capacity)	A(2)D	T over ton capacity	3	Yes DD	Yes
N. Y.	Over 1000 lb. net weight	A(5)	T over net 2 ton Comb (6)	2	Yes DD	Yes
N. C.	2 tons or over gross	D	T, Trl, SemiT	NS	Yes DD	Yes
N. D.	—	—	—	—	Yes DD	Yes
Ohio	2000 lbs. or more gross	A(1)D	B, T, TTr	3	No	No
Okla.	—	—	—	—	No	No
Ore.	—	A	B, T	3	Yes DD	Yes
Penna.	Over 1000 lbs. net weight	(3)A(1)D	B, CMV, Comb, over 5½ ton	3	Yes DD	Yes
R. I.	Trailers, gross over 14 tons	A	PSMV,CMV ov. 1 ton, comb	NS	Yes DD	Yes
S. C.	*SemiT over 1½ ton, gross* Over 3000 lbs. gross	(3)C(1)D	T, Trl, SemiT, *MC*	3	Yes DD	Yes
S. D.	—	A	T, Tr Comb	2	Yes DD	Yes
Tenn.	Over 3000 lb. gross	(3)A(1)D	B, T, TTr	3	No	Yes
Texas	—	—	CMV, Comb, B	3	No	No
Utah	Over 3000 lbs. gross	(3)A(1)D	B, T, TTr	3	Yes DD	Yes
Vt.	—	—	B, T, Comb	3	No	Yes
Va.	Over 2 tons capacity	D	B, T	3	Yes DD	Yes
Wash.	Over 1 ton gross	AD(4)	T, CMV, Comb	3	Yes DD	Yes
W. Va.	Over 3000 lb. gross	(3)A(1)D	*B, T, TTr*	*3*	No	No
Wisc.	Over 3000 lb. gross	AD	T, Comb	1 or 2	No	No
Wyo.	Over 3000 lb. gross	(3)A(1)D	T, Comb, B	3	Yes DD	Yes

THIRD AXLE Specifications

THIRD AXLE MAKE AND MODEL and Truck Model Adapted To	Capacity (Lb.) See Explanatory Notes	Price (f. o. b. factory)	Weight (Lb.) with Max. Tires, Frame Extension Etc.	Maximum Tire Size	LOAD DISTRIBUTION RANGE (First Figure or combination applies to center axle; second figure to third axle)		Axle Sparing (with maximum tires)	AXLE DATA			BRAKES (Standard)				Number of Points of Frame Support	Spring Size or Number Leaves Added	Spindle Diameter (at inner bearing)
								Make	Type	Size	Make and Type	Drum Material	Brake Diameter and Width	Lining Area			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Trailing Axles																	
FABCO																	
220 (Ford)	11000	675	2000	8.25/20	52-48	.....	44	Tim	T	4½	LH	CA	15x3½	192	2	48x2½	2 11/16
220 (Chevrolet)	11000	675	2000	8.25/20	52-48	.....	44	Tim	T	4½	LH	CA	15x3½	192	2	48x2½	2 11/16
220 (All other makes)	11000	675	2000	8.25/20	52-48	.....	44	Tim	T	4½	LH	CA	16x3½	205	2	48x2½	2 11/16
330 (All other makes)	13000	875	3000	9.00/20	52-48	.....	44	Tim	T	4½	LH	CA	16x3½	205	2	48x3	2 7/8
5600 (All other makes)	18000	1300	3200	11.00/20	55-45	.....	52	Tim	T	5	M	CA	16½x7	435	2	56x4	3¼
LITTLE GIANT																	
8-ton (For any 1½ ton truck)	16000	488	1575	8.25/20	47-53	.....	42	Shu	Sq	2¾	BHV†	CA	16x3	167	4	42x2½	2 5/8
10-ton (For any 2 ton truck)	18000	750	2000	9.00/20	50-50	.....	44	Shu	Sq	3	BHV†	CA	16x3½	180	4	44x3	3
12-ton (For any 2½ to 5 ton truck)	20000	890	2410	10.00/20	50-50	.....	44	Shu	Sq	3¼	BHV†	CA	17x4	250	4	44x3½	3
TRUCKTOR (x)																	
HLF (Ford 1½)	8800	480	1750	7.50/20	50-50	60-40	43	Own	Sr	3	LHV	CA	15x3½	196	6	33½x2½	2 5/8
HLC (Chevrolet 1½)	8800	480	1750	7.50/20	50-50	60-40	43	Own	Sr	3	CHV	CA	16x3	219	6	39½x2½	2 5/8
HLL (Light truck tires to 8.25/20)	11000	575	1895	8.25/20	50-50	60-40	45	Own	Sr	3	LHV	CA	16x2¾	132	6	33½x2½	2½
HLS (Medium truck tires to 9.00/20)	14000	881	2265	9.00/20	50-50	60-40	48	Own	Sr	3¼	LHV	CA	16x3½	205	6	38½x3	2¾
HLR (Heavy truck tires to 10.00/20)	16000	1098	2710	10.00/20	50-50	60-40	48	Own	Sr	3½	WAM	CA	16½x6	251	6	40x3	2 13/16
HR (Heavy duty tires to 12.00/20)	21000	1282	3177	11.00/24	50-50	60-40	52	Own	Sr	4	WAM	CA	16½x6	251	6	41½x3	3⅜
HR5 (Extra heavy duty tires)	30000	††	3358	12.00/24	50-50	60-40	53½	Own	Sr	5½	WAM	CA	17¼x5½	380	6	43½x4	3½
TRUXMORE																	
26X (Not exc. 271 cu. in.)	12000	657	2500	8.25/20-10	54-46	65-35	44-45	Own	Sq	2¾	LHV	CA	15x3½	200	4	**	2 11/16
28	13000	790	2700	8.25/20	53-47	65-35	45-46	Own	Sq	3	LHV	CA	16x3½	210	4	**	2 15/16
32	14000	985	2900	9.00/20	53-47	65-35	46-47	Own	Sq	3	LHV	CA	16x3½	210	4	**	2 11/16
36	16000	1075	3500	10.00/20	52-43	65-35	47-48	Own	Sq	3¼	LHV*	CA	17¼x4	251	4	**	3 1/16
42	17000	1200	3700	11.00/20	52-43	65-35	48-50	Own	Re	(v)	LHV*	CA	17¼x4	251	4	**	3¼
50	18000	1350	4100	11.00/24	50-50	65-35	49-53	Own	Sq	3½	LHV*	CA	17¼x5	350	4	**	3⅝
50X	25000	††	4400	12.00/24	50-50	65-35	52-53	Own	Re	(w)	M	CA	17¼x5½	400	4	**	3½
UTILITY																	
25 (For any 1½-2 ton truck)	9000	434	1100	7.50/20	55-45	63-33	41	Own	Sq	2½	OMV†	CA	16x4	240	4	None	2½
30 (For any 3½ ton truck)	13000	633	1600	9.00/20	55-45	63-33	44	Own	Sq	3	OMV†	CA	17x4	264	4	None	2¾
35 (For any 5 ton truck)	18000	752	1900	10.50/24	55-45	63-33	50	Own	Sq	3½	OMV†	CA	17x4	264	4	None	3
Driving Axles																	
FABCO																	
520 (Ford)	10500	1400	2400	8.25/20	50-50	.....	44	Tim	D	.....	FH	CA	15x3½	192	2	48x2½	2 5/8
520 (Chevrolet)	10500	1400	2400	8.25/20	50-50	.....	44	Chev	D	.....	CH	CA	16x3	176	2	48x2½	2 5/8
520 (All other makes)	10500	(z)	2400	8.25/20	50-50	.....	44	Match	D	.....	LH	CA	Match	(z)	2	48x2½	z
630 (All other makes)	13000	(z)	3000	10.00/20	50-50	.....	48	Match	D	.....	LH	CA	Match	(z)	2	53x3	z
THORNTON TANDEM																	
DC26C (Chevrolet)	11250	.....	6330	8.25/20	50-50	.....	41⅛	Chev	D	3½	LH	CA	16x3	218	4	44⅛x2¼	2 5/16
DC27CO (Chevrolet)	11250	.....	6815	8.25/20	50-50	.....	41⅛	Chev	D	3½	LH	CA	16x3	218	4	44⅛x2¼	2 5/16
DC29E (Chevrolet)	12750	.....	7090	8.25/20	50-50	.....	42⅝	Eaton	D	4¼	LH	CA	15x3½	198	4	42⅝x2¼	2 5/16
DC30EO (Chevrolet)	12750	.....	7230	8.25/20	50-50	.....	42⅝	Eaton	D	4¼	LH	CA	15x3½	198	4	42⅝x2¼	2 5/16
DD28T-F (Dodge)	11250	.....	6400	8.25/20	50-50	.....	42	Tim	D	3¾	LH	CA	15x3½	198	4	42x2¼	2 5/16
DD29E-F (Dodge)	12750	.....	7020	8.25/20	50-50	.....	42⅝	Eaton	D	4¼	LH	CA	15x3½	198	4	42⅝x2¼	2 5/16
DD29E-H (Dodge)	12300	.....	7490	8.25/20	50-50	.....	42⅝	Eaton	D	4¼	LH	CA	15x3½	198	4	42⅝x2¼	2 5/16
DD32E-H (Dodge)	14000	.....	7930	9.00/20	50-50	.....	47½	Eaton	D	3¼x1½	LH	CA	16¼x3½	237	4	47½x2½	2 11/16
DFe26T-18M (Federal)	11250	.....	6700	8.25/20	50-50	.....	42	Tim	D	3¾	LH	CA	15x3½	198	4	42x2¼	2 5/16
DFe29E-29M (Federal)	12750	.....	7640	8.25/20	50-50	.....	42⅝	Eaton	D	4¼	LH	CA	15x3½	198	4	42⅝x2¼	2 5/16
DF26F (Ford)	11250	.....	6500	8.25/20	50-50	.....	42	Ford	D	3¾	LH	CA	15x3½	198	4	42x2¼	2 5/16
DF27FO (Ford)	11250	.....	6760	8.25/20	50-50	.....	42	Ford	D	3¾	LH	CA	15x3½	198	4	42x2¼	2 5/16
DF29E (Ford)	12750	.....	7220	8.25/20	50-50	.....	42⅝	Eaton	D	4¼	LH	CA	15x3½	198	4	42⅝x2¼	2 5/16
DF30EO (Ford)	12750	.....	7230	8.25/20	50-50	.....	42⅝	Eaton	D	4¼	LH	CA	15x3½	198	4	42⅝x2¼	2 5/16
DG26C-CC300 (G.M.C.)	11250	.....	6330	8.25/20	50-50	.....	41⅛	Chev	D	3½	LH	CA	16x3	218	4	44⅛x2¼	2 5/16
DG29E-CC300 (G.M.C.)	12750	.....	6815	8.25/20	50-50	.....	42⅝	Eaton	D	4¼	LH	CA	15x3½	198	4	42⅝x2¼	2 5/16
DG29E-CC350 (G.M.C.)	12750	.....	7065	8.25/20	50-50	.....	42⅝	Eaton	D	4¼	LH	CA	15x3½	198	4	42⅝x2¼	2 5/16
DG29E-CC400 (G.M.C.)	12750	.....	7285	8.25/20	50-50	.....	42⅝	Eaton	D	4¼	LH	CA	15x3½	198	4	42⅝x2¼	2 5/16
DG32E-CC450 (G.M.C.)	14250	.....	8055	9.00/20	50-50	.....	47½	Eaton	D	3¼x1½	LH	CA	16¼x3½	237	4	47½x2½	2 11/16
DG32E-AC500 (G.M.C.)	14250	.....	8920	9.00/20	50-50	.....	47½	Eaton	D	3¼x1½	LH	CA	16¼x3½	237	4	47½x2½	2 11/16
DI26T-K5 (I.H.C.)	11250	.....	7285	8.25/20	50-50	.....	42	Tim	D	3¾	LH	CA	15x3½	198	4	42x2¼	2 5/16
DI29E-KS5 (I.H.C.)	12750	.....	7420	8.25/20	50-50	.....	42⅝	Eaton	D	4¼	LH	CA	15x3½	198	4	42⅝x2¼	2 5/16
DI27T-K6 (I.H.C.)	11250	.....	7660	8.25/20	50-50	.....	42	Tim	D	3¾	LH	CA	15x3½	198	4	42x2¼	2 5/16
DI30E-KS6 (I.H.C.)	12750	.....	7800	8.25/20	50-50	.....	42⅝	Eaton	D	4¼	LH	CA	15x3½	198	4	42⅝x2¼	2 5/16
DI32IE-KS7 (I.H.C.)	14250	.....	8375	9.00/20	50-50	.....	47½	Eaton	D	3¼x4½	LH	CA	16¼x3½	237	4	47½x2½	2 11/16
DM26T-EE (Mack)	11250	.....	6620	8.25/20	50-50	.....	42	Tim	D	3¾	LH	CA	15x3½	198	4	42x2¼	2 5/16
DM29E-EF (Mack)	12750	.....	7100	8.25/20	50-50	.....	42⅝	Eaton	D	4¼	LH	CA	15x3½	198	4	42⅝x2¼	2 5/16
DM29E-EG (Mack)	12750	.....	7250	8.25/20	50-50	.....	42⅝	Eaton	D	4¼	LH	CA	15x3½	198	4	42⅝x2¼	2 5/16
DR26T-19 (Reo)	11250	.....	6900	8.25/20	50-50	.....	42	Tim	D	3¾	LH	CA	15x3½	198	4	42x2¼	2 5/16
DR29E-19 (Reo)	12750	.....	7030	8.25/20	50-50	.....	42⅝	Eaton	D	4¼	LH	CA	15x3½	198	4	42⅝x2¼	2 5/16
DR29E-20 (Reo)	12750	.....	9300	8.25/20	50-50	.....	42⅝	Eaton	D	4¼	LH	CA	15x3½	198	4	42⅝x2¼	2 5/16

NOTES ON HEADINGS

General—(a) The capacity of the third axle (Column 2) is not to be confused with the total capacity made possible on the converted vehicle.

Column 3. The price of the unit includes the standard brakes specified in brake column and frame extensions that extend forward under the cab. Tires and brake (air or vacuum) power are not included in price nor is the cost of installation.

Column 4. Weight of third axle unit includes all appurtenances and maximum tires.

Column 15 gives brake lining area of attachment unit only.

ABBREVIATIONS

††—On application
*—Mechanical Air Optional
**—Truxmore—Heavy cast beams (cushioned by patented spring arrangement) used in place of leaf springs
(v)—3¼x3½ (w)—3½x4½
(x)—Patented 4-wheel chain drive available for all Trucktor units
(z)—Depends upon installation

†—OPTIONAL BRAKES

Little Giant—Own or Bendix
Utility—Bendix and Lockheed; Westinghouse "Air"

COLUMN 9

Chev—Chevrolet
Eaton
Ford—Ford
Own—Own
Shu—Shuler
Tim—Timken

COLUMN 10

D—Driving
Re—Rectangular
Sr—Solid round
Sq—Square
T—Tubular

COLUMN 13

CA—Cast Alloy Iron

COLUMN 12

A—Air
B—Bendix
C—Chevrolet
F—Ford
H—Hydraulic
L—Lockheed
M—Mechanical
O—Own
V—Vacuum power
W—Westinghouse

TRUCK SPECIFICATIONS TABLE

OF 1946 PRODUCTION MODELS

DATA SUPPLIED BY MANUFACTURERS AND TABULATED BY

COMMERCIAL CAR JOURNAL

KEY TO DEFINITIONS, REFERENCES AND ABBREVIATIONS

DEFINITIONS

MAKE AND MODEL

Only Domestic Truck Models are listed.

OPTIONAL UNITS

For the express purpose of best fitting the truck to the individual job most of the models listed can be provided with optional engines, transmissions, axles, etc., and these models when so equipped are considered standard stock models.

CHASSIS LIST PRICE

The chassis list price applies to the minimum standard wheelbase with standard tires and standard equipment. All prices are F.O.B. factory. Chassis list price does not include the price of the Cab unless otherwise noted.

RECOMMENDED GROSS VEHICLE WEIGHT FOR NORMAL SERVICE

The Gross Weights published herewith are those supplied by manufacturers as their Recommended Gross Vehicle Weights for Normal Operating Conditions, and are based upon the Maximum Authorized Tire Size listed. In actual practice the manufacturer may either increase or decrease the gross vehicle weight rating when either favorable or unfavorable operating conditions are involved. Since the proper performance of a motor truck depends upon many factors, including grades, road conditions, etc., the gross weights that a manufacturer is prepared to recommend will vary with particular conditions, and the manufacturer's own standard of safety factors. Specific recommendations, therefore, should be obtained from the manufacturer's representative.

CHASSIS WEIGHT

The chassis weight listed includes the weight of the minimum standard wheelbase chassis, with cowl, with standard tires, with standard equipment, with crankcase and cooling system full, and 5 gallons of fuel in the tank. It does not include the weight of the Cab. This applies to C.O.E. as well as conventional chassis types. Exceptions are noted.

STANDARD TIRE SIZE

The standard tire size listed is that which is included in the Chassis List Price.

MAXIMUM AUTHORIZED TIRE SIZE

The tire size listed in this column is the maximum size recommended by the manufacturer of the chassis for the Gross Vehicle Weight for Normal Operating Conditions. It is furnished at extra cost, if it differs from the standard size. Dual rears are understood; exceptions noted.

MINIMUM STANDARD WHEELBASE

The minimum standard wheelbase is the so-called standard wheelbase on which the Chassis List Price is based.

MAXIMUM STANDARD WHEELBASE

The maximum standard wheelbase is the extreme end of the standard range of wheelbases offered by the chassis maker.

MAXIMUM BRAKE HP.

Maximum Brake Horsepower at Given R.P.M. is actual dynamometer reading without accessories.

GEAR RATIO RANGE

Gear Ratio Range in High—Ratios within the range given are available at no extra cost. Exceptions are noted.

TRACTORS

Unless given the designation (N)—meaning not available as a tractor—all standard models may be assumed to be available as tractors. Exclusively Tractor models are designated (T).

KEY TO REFERENCES

c.f.—Cab Forward design.
c.o.e.—Cab-Over-Engine design.
(D)—Diesel-engine equipped.
(T)—Designed for tractor use only.
(C)—Converted Ford or Chevrolet Model.

(2) **International Harvester**—Specifications shown represent only the basic standard chassis units and standard chassis ratings in keeping with definitions established by Commercial Car Journal. Optional units not shown such as engines, clutches, transmissions, axles or axle ratios, brakes, wheels and tires, frames or frame reinforcements, optional wheelbases or any other units which make up part of the truck chassis and which International will furnish and approve from the factory as optional equipment can or will change either the ratings, chassis weight shown or performance of the truck as indicated by this list.

Also the company reserves the privileges of assigning special gross vehicle ratings for any chassis providing in the opinion of our engineering department, the type of service justifies the new rating without decreasing the safety factor designed into the truck.

(a)—Available with Eaton Two-Speed Axle designated KS Models.

(b) Current models will include, at additional cost, certain items not considered standard equipment. These items are included in the specifications and are listed below—Model K-3, oversize transmission; Model K-6, K-7 and K-6-F, oversize brakes; Model K-8, oversize engines and brakes; Model K-10, oversize engine, transmission and brakes; Model KR-11, oversize engine and transmission; Models K-8F and K-11-F, oversize engine and brakes.

KEY TO ABBREVIATIONS

MAKES—ALL

B—Bendix
BL—Brown-Lipe.
Bu or Bud—Buda.
C—Chevrolet.
Cl or Cla—Clark.
Con—Continental.
Cum—Cummins-Diesel.
Eat—Eaton.
F—Ford.
Fu—Fuller.
H—Hotchkiss.
Her—Hercules.
L—Lockheed.
LH—Lockheed front, Wagner "hi-Torc" rear.
LW—Lockheed front, Wisconsin rear.
M—Midland.
N.P.—New Process.
O or Ow—Own.
Op or Opt—Optional.
Shu—Shuler.
Spi—Spicer
T or Tim—Timken.
TW—Timken-Wisconsin.
WG—Warner Gear.
Wau—Waukesha.
W or Wis—Wisconsin.
Ws—Westinghouse.
WW—Westinghouse or Wagner

BRAKES—SERVICE

Location

4—Four Wheels, front and rear
4r—Four Wheels, rear only.

Type

I—Internal.
X—External

Operation

A—Air.
H—Hydraulic.
V—Vacuum.

BRAKES—HAND

Location

C—Center of double propeller shaft.
2—Rear wheels.
4—Four wheels.
6—Six wheels

P—Back of Power Divider.
J—Jackshaft.
T—Transmission.
F—Driveshaft.

Type

D—Tru-Stop disk.
I—Internal.
M—Mechanical.
X—External.
PD—Two drums on rear of power divider.

BRAKE DRUMS

Material

a—Cast alloy iron.
A—American Car Foundry.
c—Cast iron.
Cl—Copper iron.
Co—Composite.
D—Dayton.
E—Ermalite.
G—Gunite.
N—Nickel iron.

(Where a combination of any of the above is used, the first reference mark applies to the front and the second to the rear drums.)

FRAME

Type

C—Channel.
T—Channel tapered front and rear.
L—Channel reinforced with liner.
B—Channel reinforced with both liner and fishplate.
P—Channel reinforced with plate
TL—Channel tapered front and rear reinforced with liner.
D—Drop Center
Tf—Tapered front.
A—Straight section sidemembers, lined with oak inserts.

GOVERNOR STANDARD

Y—Yes.
N—No.

REAR AXLE

Final Drive and Type

B—Bevel.
F—Full-floating.
Hy—Hypoid.
d—Dual range axle.
2—Double Reduction.
S—Spiral bevel.
W—Worm.
½—Semi-Floating
T—Torque Tube

Gear Ratios

(**) Only one ratio.

Drive and Torque

H—Hotchkiss (springs).
R—Radius Rods.
L—Parallel Torque Rods
T—Torque Arm.

WHEELS DRIVEN

2F—Forward unit of Rear Axle Group.
2R—Rear Unit of Rear Axle Group.
4R—Forward and rear units of Rear Axle Group.
6—All wheels.

Line Number	MAKE AND MODEL	Chassis List Price	WHEEL-BASE Minimum Standard	WHEEL-BASE Maximum Standard	Gross Vehicle Weight for Normal Service	Chassis Weight (See definition)	TIRE SIZES D-dual rear S-single rear: Standard Front and Rear	TIRE SIZES: Maximum Authorized Tire Size (Duals unless noted)	ENGINE DETAILS: Make and Model	No. of Cylinders, Bore and Stroke	Displacement	Comp. Ratio	Torque lb. ft.	Max. Brake H.P. at R.P.M. Given	Main Bearings: Number, Diameter and Length	Governor Standard	TRANSMISSION: Make and Model	Forward Sp'ds	REAR AXLE: Make and Model	Gear and Type	Drive	Torque	Gear Ratio Range In High	FRONT AXLE: Make and Model	BRAKES SERVICE: Make Location Type Operat'n	Lining Area	Drum Area	Drum Material	Hand Location Type	C-A Dimensions (Min. Std. W. B.)	FRAME: Side Rail Dimensions	Type
1	Autocar.....C-50.....		200	200	23000	▲9500	10.00/20	10.00/22	Own 377	6–4x5	377	5.8	292	119–2800	7–3½x11⅞	Y	Own DF5	5	Own F	2SF	H		7.56–8.27	Tim 35100	Ws4IA	658	947	N	2I	120	9x3x¼	T
2	(T).....C-50-T.....		148	164	23000	▲8950	10.00/20	10.00/22	Own 377	6–4x5	377	5.8	292	119–2800	7–3½x11⅞	Y	Own DF5	5	Own F	2SF	H		7.56–8.27	Tim 35000	Ws4IA	594	838	N	2I	68	9x3x¼	T
3	(c.o.e.)....U-50		142	142	23000	▲8950	10.00/20	10.00/20	Own 377	6–4x5	377	5.8	292	119–2800	7–3¼x11⅛	Y	Own UDF5	5	Own F	2SF	H	**	8.27	Tim 35100	Ws4IA	658	947	N	2I	120	9x3x¼	T
4	(c.o.e.)...U-50T		96	96	23000	▲8800	10.00/20	10.00/20	Own 377	6–4x5	377	5.8	292	119–2800	7–3¼x11⅛	Y	Own UDF5	5	Own F	2SF	H	**	8.27	Tim 35100	Ws4IA	658	947	N	2I	74	9x3x¼	T
5	.....C-70		200	200	26000	▲10300	11.00/20	11.00/20	Own 447	6–4¼x5½	447	5.7	352	133–2500	7–3x13⅛	Y	Own TF5	5	Own F	2SF	H		7.56–8.27	Tim 27454	Ws4IA	658	947	N	CD	120	9x3x¼	T
6	.....C-70-S		200	200	28000	▲10400	11.00/20	11.00/20	Own 501	6–4½x5¼	501	5.7	402	165–2700	7–3¼x13⅛	Y	Own TF5	5	Own TK	2SF	H		7.28–8.51	Tim 27454	Ws4IA	658	947	N	CD	120	9x3x¼	T
7	(T).....C-70-T		148	164	26000	▲9400	10.00/20	11.00/20	Own 447	6–4¼x5¼	447	5.7	352	133–2500	7–3x13⅛	Y	Own TF5	5	Own F	2SF	H		7.56–8.27	Tim 35000	Ws4IA	594	838	N	CD	68	9x3x¼	T
8	(T).....C-70-TS		148	164	28000	▲10100	11.00/20	11.00/22	Own 501	6–4½x5¼	501	5.7	402	165–2700	7–3x13⅛	Y	Own TF5	5	Own TK	2SF	H		7.28–8.51	Tim 27454	Ws4IA	658	947	N	CD	68	9x3x¼	T
9	(e.u.s.).....U-70		128	163	26000	▲10900	11.00/20	1..00/22	Own 447	6–4¼x5¼	447	5.7	352	133–2500	7–3¼x13⅛	Y	Own UTF5	5	Own F	2SF	H		7.56–8.27	Tim 27454	Ws4IA	658	947	N	CD	103¾	9x3x¼	T
10	(e.u.s.)....U-70S		128	163	28000	▲10900	11.20/20	11.00/22	Own 501	6–4½x5¼	501	5.7	402	165–2700	7–3¼x13⅛	Y	Own UTF5	5	Own TK	2SF	H		7.28–8.51	Tim 27454	Ws4IA	658	947	N	CD	103¾	9x3x¼	T
11	(e.u.s.)....U-70T		109	109	26000	▲10250	11.00/20	11.00/22	Own 447	6–4¼x5¼	447	5.7	352	133–2500	7–3¼x13⅛	Y	Own UTF5	5	Own F	2SF	H		7.56–8.27	Tim 27454	Ws4IA	658	947	N	CD	84¼	9x3x¼	T
12	(e.u.s.)..U-70TS		112	112	28000	▲10550	11.00/20	11.00/22	Own 501	6–4½x5¼	501	5.7	402	165–2700	7–3¼x13⅛	Y	Own UTF5	5	Own TK	2SF	H		7.28–8.51	Tim 27454	Ws4IA	658	947	N	CD	87¼	9x3x¼	T
13	.....C-90		200	200	30000	▲11900	11.00/24	11.00/24	Own 501	6–4½x5¼	501	5.7	402	165–2700	7–3x13⅛	Y	Own TF4&A3	12	Own G	2SF	H	**	8.76	Tim 27454	Ws4IA	739	1050	N	CD	120	10½x3x☆	T
14	†.....C-90D		171	171	44000	▲13300	11.00/24	12.00/24♦	Own 501	6–4½x5¼	501	5.7	402	165–2700	7–3¼x13⅞	Y	OTF4, BL703	12	Tim 79746W	2SF	R		9.47–11.36	Tim 27453	Ws4IA	739	1050	N	CD	90	10½x3x☆	LTf
15	(T).....C-90T		148	164	30000	▲11050	11.00/22	11.00/24	Own 501	6–4½x5¼	501	5.7	402	165–2700	7–3¼x13⅛	Y	Own TF5	5	Own G	2SF	H		7.40–8.76	Tim 27454	Ws4IA	658	947	N	CD	68	9x3x¼	T
16	(e.u.s.).....U-90		128	163	30000	▲11700	11.00/22	11.00/24	Own 501	6–4½x5¼	501	5.7	402	165–2700	7–3¼x13⅛	Y	Own UTF5	5	Own G	2SF	H		7.40–8.76	Tim 27454	Ws4IA	658	947	N	CD	103¾	9x3x¼	T
17	(e.u.s.)...U-90T		109	109	30000	▲10900	11.00/22	11.00/24	Own 501	6–4½x5¼	501	5.7	402	165–2700	7–3¼x13⅛	Y	Own UTF5	5	Own G	2SF	H		7.40–8.76	Tim 27454	Ws4IA	658	947	N	CD	84¼	9x3x¼	T
18	(D).....DC-100		215	215	▼45000	▲13200	10.00/20	10.00/22	Cum HB600	6–4⅞x6	672	17.	500	150–1800	7–4½x15¾	Y	BL7741, 703A	12	Own G	2SF	H	**	6.01	Tim 27454	Ws4IA	658	947	N	CD	126▲	9x3x¼	LTf
19	(D)†.....DC 100D		158	158	54000	▲15400	12.00/24	12.00/24♦	Cum HBD600	6–4⅞x6	672	17.	500	150–1800	7–4½x15¾	Y	BL7741, 703	12	Tim 79746W	2SF	R		9.23–11.36	Tim 27453	Ws4IA	739	1050	N	CD	83½	10½x3x☆	LTf
20	(D)(T) DC-100T		159	159	36000	▲12900	10.00/20	11.00/24	Cum HB600	6–4⅞x6	672	17.	500	150–1800	7–4½x15¾	Y	BL7741, 703A	12	Own G	2SF	H		6.01–7.40	Tim 27454	Ws4IA	658	947	N	CD	70▲	10½x3x¼	CTf
21	Available																															
22	.....CS200-SP		126	133	15000	.....	7.00/20D	7.50/20	Wau 6BM	6–3⅝x4¼	263	5.9	180	78–2800	7–2¾x10¼	N	WG T9	4	Tim 53440H	SF	H	**	–6.67	Tim 32502H	L4IH	.....	.....	a	TX	Opt	10x3x¼	T
23	.....C-250-SP		105	....	18000	.....	8.25/20D	9.00/20	Wau 6BZ	6–4x4¼	320	5.9	210	95–2500	7–2⅝x10¼	N	Fu 5A330	5	Tim 54411H	SF	R		6.83–7.4	Tim 32502H	L4IH	334	583	a	TX	Opt	10x3x¼	T
24	.....CS-250-SP		105	....	20000	.....	8.25/20D	9.00/20	Wau 6BZ	6–4x4¼	320	5.9	210	95–2500	7–2⅝x10¼	N	Fu 5A330	5	Tim 56410H	SF	R		6.83–7.4	Tim 32502H	L4IH	334	583	a	TX	Opt	10x3x¼	T
25	....CS-400-LSP		105	....	21500	.....	9.00/20D	10.00/20	Wau 6BZ	6–4x4¼	320	5.9	210	95–2500	7–2⅝x10¼	N	Fu 5A330	5	Tim 56410H	SF	R		6.83–7.4	Tim 35000H	L4IH	334	583	a	TX	Opt	12x3x¼	T
26	.....CS-500-SP		105	....	22000	.....	9.00/20D	10.00/20	Wau 6MZA	6–4¼x4¾	404	5.9	286	112–2500	7–2⅝x12½	Y	Fu 5F430	5	Tim 56410H	SF	R		6.83–7.4	Tim 35000H	L4IH	334	583	a	TX	Opt	12x3x¼	T
27	.....CS-550-SP		105	....	24000	.....	9.00/20D	10.00/20	Wau 6MZA	6–4¼x4¾	404	5.9	286	112–2500	7–2⅝x12½	Y	Fu 5F430	5	Tim 58300H	SF	R		6.83–7.4	Tim 35000H	L4IH	380	660	a	TX	Opt	12x3x¼	T
28	.....CS-550-SPX		112	....	32000	.....	10.00/20D	11.00/20	Wau 6MZA	6–4¼x4¾	404	5.9	286	112–2500	7–2⅝x12½	Y	Fu 5F430	5	Tim 8200H	2F	R		–7.84	Tim 26450H	L4IH	570	1051	a	TX	Opt	14x3x☆	T
29	.....CS-600		Opt	Opt	36000	.....	11.00/20	11.00/24	Wau 6SRKR	6–4⅝x5½	517	5.9	365	125–2300	7–2⅝x12½	Y	Fu 5F430	5	Tim 8200PA	2F	R		–7.84	Tim 27452TW	L4IH	722	1051	a	TX	Opt	14x3x☆	T
30	.....CS-600-SP		Opt	Opt	40000	.....	11.00/20	11.00/24	Wau 145GK	6–5¼x6	779	5.	650	150–2000	7–3½x17¾	Y	Fu 5A920▽	2F	R	6.42–7.84	TW	L4IH	722	1051	a	TD	Opt	14x3x☆	T
31	(D)CS-600-SP.Opt.		Opt	Opt	40000	.....	11.00/20	11.00/24	Cum HB600	6–4⅞x6	672	17.	510	150–1800	7–4½x16½	Y	Fu 5A920▽	5	T SW3012PA	WF	R	**	–6.16	Tim 27452TW	L4IH	.....	.....	A	TD	Opt	14x3x☆	T
32	Brockway.....78		138	164	13000	3965	6.00/20D	32x6	Con 24B	6–⅞x4⅛	210	6.0	154	71–3100	4–2¾x6	N	WG T9	4	Tim 53521H	SF	H		5.66–6.6	Tim 30000H	L4IH	255	402	a	TX	65▲	8x3x¼	T
33	83		138	176	14000	4100	6.50/20D	7.50/20	Con 25B	6–3⅞x4⅜	244	6.2	180	80.5-3100	4–2⅜x6½	N	WG T9	4	Tim 53521H	SF	H		5.66–6.6	Tim 30000H	L4IHV	255	402	a	TX	65▽	8x3x¼	T
34	88		150	176	15000	4500	6.50/20D	7.50/20	Con 25B	6–3⅞x4⅜	244	6.2	180	80.5-3100	4–2⅜x6½	N	WG T9	4	Tim 53307H	SF	H		6.2–6.8	Tim 30000H	L4IHV	298	477	a	TX	71▲	8x3x¼	T
35	92		150	188	16000	4700	7.00/20D	8.25/20	Con 25B	6–3⅞x4⅜	244	6.2	180	80.5-3100	4–2⅜x6½	N	WG T9	4	Tim 54411H	SF	H		5.83–6.8	Tim 31000H	L4IHV	329	580	a	CD	83▲	8x3x¼	T
36	94		156	188	18500	5050	7.50/20D	8.25/20	Con 25B	6–3⅞x4⅜	244	6.2	180	80.5-3100	4–2⅜x6½	N	BL B341	4	Tim 56411H	SF	H		6.16–7.4	Tim 31000H	L4IHV	370	660	a	CD	83▲	8x3x¼	T
37	112		150	188	18000	5150	7.00/20D	8.25/20	Con 38B	6–3¾x4⅜	290	6.0	217	92–2800	7–2¾x12⅛	N	BL B341	4	Tim 54411H	SF	H		5.83–6.8	Tim 31000H	L4IHV	329	580	a	CD	77▲	8x3x¼	T
38	128		156	188	20000	5550	7.50/20D	8.25/20	Con 38B	6–3¾x4⅜	290	6.0	217	92–2800	7–2¾x12⅛	N	BL B341	4	Tim 56411H	SF	H		5.71–7.4	Tim 31000H	L4IHV	370	660	a	CD	83▲	8x3x¼	T
39	146		126	206	20000	6060	8.25/20D	9.00/20	Con 40B	6–4x4⅜	330	6.0	245	104–2800	7–2⅝x12⅛	Y	Fu 5A330	5	Tim 56411H	SF	R		5.76–7.4	Tim 32505H	L4IHV	370	660	a	CD	53	8x3x¼	T
40	(T).....147		132	164	.....	6000	8.25/20D	9.00/20	Con 40B	6–4x4⅜	330	6.0	245	104–2800	7–2⅝x12⅛	Y	Fu 5A33	5	Eat A17-17000	SFd	H		Dual Rge.	Tim 32505H	L4IHV	370	660	a	CD	53	8x3x¼	T
41	152		126	206	22000	6350	8.25/20D	9.00/20	Con 41B	6–4¼x4⅝	371	5.9	280	100–2500	7–2⅞x13½	Y	Fu 5A43	5	Tim 56411H	SF	R		5.71–6.83	Tim 32505H	L4IHV	370	660	a	CD	53	8x3x¼	T
42	(T).....153		132	164	.....	6400	8.25/20D	9.00/20	Con 41B	6–4¼x4⅝	371	5.9	280	100–2500	7–2⅞x13½	Y	Fu 5A43	5	Tim 58300H	SF	H		6.14–7.8	Tim 32505H	L4IHV	370	660	a	CD	53	8x3x¼	T
43	(T).....154		132	164	.....	6300	8.25/20D	9.00/20	Con 41B	6–4¼x4⅝	371	5.9	280	100–2500	7–2⅞x13½	Y	Fu 5A43	5	Eat A17-71000	SFd	H		Dual Rge.	Tim 32505H	L4IHV	370	660	a	CD	53	8x3x¼	T
44	(T).....156		132	164	.....	6950	9.00/20D	10.00/20	Con 42B	6–4⅞x4⅜	405	5.7	305	112–2500	7–2¾x13½	Y	Fu 5A43	5	Eat A9-20000	SFd	H		Dual Rge.	Tim 32505H	L4IHV	459	768	a	CD	53	8½x3x☆	T
45	162		121	219	25000	7250	9.00/20D	10.00/20	Con 41B	6–4½x4⅝	371	5.9	280	100–2500	7–2⅞x13½	Y	Fu 5A43	5	Tim 58300H	SF	R		6.14–7.8	Shu 15785B	L4IHV	370	663	a	CD	51	8½x3x☆	T
46	166		121	219	28000	7800	10.00/20D	11.00/20	Con 42B	6–4⅞x4⅜	405	5.7	305	112–2500	7–2¾x13½	Y	Fu 5A43	5	Wis 1337H	2F	R		5.63–8.59	Shu 15785B	L4IHV	459	772	a	CD	51	8½x3x☆	T
47	.....170X		153	219	25000	7960	9.00/20D	10.00/22	Con 33B	6–4½x4¾	381	4.7	276	106–2600	7–2¾x13⅛	Y	Fu 5A62	5	Tim 72300H	2F	R		5.78–7.35	Shu 15785B	L4IHV	370	663	a	CD	83▲	8½x3x☆	T
48	.....175X		153	219	30000	8550	9.00/20D	11.00/22	Con 34B	6–4½x4¾	427	5.4	322	133–2600	7–2¾x13⅛	Y	Fu 5A62	5	Wis 1337BH	2F	R		5.63–8.59	Shu 15785B	L4IHV	459	772	a	CD	83▲	8½x3x☆	T
49	.....195X		153	219	28000	8650	10.00/20D	11.00/22	Con 33B	6–4½x4¾	381	4.7	276	106–2600	7–2¾x13⅛	Y	Fu 5A62	5	Wis 1337BH	2F	R		5.63–8.59	Shu 15785B	L4IHV	459	772	a	CD	83▲	8½x3x☆	T
50	.....220X		153	219	34000	9050	11.00/20D	12.00/24	Con 34B	6–4¾x4¾	427	5.4	322	133–2600	7–2¾x13⅛	Y	Fu 5A62	5	Wis 1757H	2F	R		6.06–8.82	Shu 15795B	L4IHV	536	899	a	CD	83▲	8½x3x☆	T
51	.....240X		153	219	30000	8590	10.00/20D	11.00/24	Con 35B	6–4½x5¼	501	5.4	370	144–2400	7–2¾x13⅛	Y	Fu 5A62	5	Wis 1337BH	2F	R		5.63–7.52	Shu 15785B	L4IHV	459	772	a	CD	83▲	8½x3x☆	T
52	.....260X		195	219	34000	9720	11.00/22D	12.00/24	Con 35B	6–4½x5¼	501	5.4	370	144–2400	7–2¾x13⅛	Y	Fu MHU	4	Wis 1757H	2F	R		6.06–8.82	Shu 15795B	L4IHV	536	899	a	CD	125▲	8½x3x☆	T
53	.....260S		195	219	36000	10000	11.00/24D	12.00/24	Con 35B	6–4½x5¼	501	5.4	370	144–2400	7–2¾x13⅛	Y	Fu MHU	4	Wis 1757H	2F	R		6.06–8.82	Shu 15795B	LW41DV	600	899	a	CD	125▲	8½x3x☆	B
54	Chevrolet.....DP		115	115	4600	.....	6.00/16S	15S	O-Thrift Mas.	6–3½x3¾	216	6.5	174	90–3300	4–2¾x5⅛	N	Own	3	Own	Hy	T	**	–4.11	Own	O41H	164	242	Co	2I	38¼	5¾x2¼x☆	C
55	.....DR		125	125	5800	.....	15S	7.00/17S	O-Thrift Mas.	6–3½x3¾	216	6.5	174	90–3300	4–2¾x5⅛	N	Own	3	Own	HyF	H	**	–4.57	Own	O41H	183	272	Co	2I	48½	5¾x2¼x☆	C
56	.....DS		134	134	8800	.....	7.00/17S	7.00/18	O-Thrift Mas.	6–3½x3¾	216	6.5	174	90–3300	4–2¾x5⅛	N	Own	4	Own	HyF	H	**	–5.14	Own	O41H	248	371	Co	2I	57¾	7x2¾x☆	C
57	.....PJ		134	134	▲13000	.....	7.00/20S	7.00/20	O-Thrift Mas.	6–3½x3¾	216	6.5	174	90–3300	4–2¾x5⅛	N	Own	4	□Own	HyF	H		5.43	Own	O41H	330	478	Co	2I	57¾	7x2¾x☆	C
58	.....PK		160	160	▲13000	.....	7.00/20S	7.00/20	O-Thrift Mas.	6–3½x3¾	216	6.5	174	90–3300	4–2¾x5⅛	N	Own	4	□Own	HyF	H		5.43	Own	O41H	330	478	Co	2I	83¾	7x2¾x☆	C
59	(School bus)..PL		160	160	12000	.....	6.50/20D	7.00/20	O-Thrift Mas.	6–3½x3¾	216	6.5	174	90–3300	4–2¾x5⅛	N	Own	4	□Own	HyF	H		5.43	Own	O41H	330	478	Co	2I		7x2¾x☆	P
60	.....PV8		134	134	14000	.....	7.50/20D	7.50/20	O-Load Mas.	6–3⅞x3⅛	235	6.6	192	93–3100	4–2¾x5⅛	Y	Own	4	□Own	HyF	H		5.43	Own	O41H	330	478	Co	2I	57¾	7x2¾x☆	P
61	.....PWS		160	160	14000	.....	7.50/20D	7.50/20	O-Load Mas.	6–3⅞x3⅛	235	6.6	192	93–3100	4–2¾x5⅛	Y	Own	4	□Own	HyF	H		6.17	Own	O41H	330	478	Co	2I	83¾	7x2¾x☆	P
62	(c.o.e.).....PP		109	109	16000	.....	7.50/20D	8.25/20	O-Load Mas.	6–3⅞x3⅛	235	6.6	189	90–3100	4–2¾x5⅛	Y	Own	4	□Own	HyF	H		6.17	Own	O41H	330	478	Co	2I	62½	7x2¾x☆	P
63	(c.o.e.).....PR		132	132	16000	.....	7.50/20D	8.25/20	O-Load Mas.	6–3⅞x3⅛	235	6.6	189	90–3100	4–2¾x5⅛	Y	Own	4	□Own	HyF	H		6.17	Own	O41H	330	478	Co	2I	86	7x2¾x☆	P
64	(c.o.e.).....PS		158	158	16000	.....	7.50/20D	8.25/20	O-Load Mas.	6–3⅞x3⅛	235	6.6	189	90–3100	4–2¾x5⅛	Y	Own	4	□Own	HyF	H		6.17	Own	O41H	330	478	Co	2I	111½	7x2¾x☆	P
65	.....PV		134	134	15000	.....	7.50/20D	8.25/20	O-Load Mas.	6–3⅞x3⅛	235	6.6	192	93–3100	4–2¾x5⅛	Y	Own	4	□Own	HyF	H		6.17	Own	O41H	330	478	Co	2I	57½	7x2¾x☆	P
66	.....PW		160	160	15000	.....	7.50/20D	8.25/20	O-Load Mas.	6–3⅞x3⅛	235	6.6	192	93–3100	4–2¾x5⅛	Y	Own	4	□Own	HyF	H		6.17	Own	O41H	330	478	Co	2I	83¾	7x2¾x☆	P
67	(School bus) .PX		195	195	15000	.....	7.50/20D	8.25/20	O-Load Mas.	6–3⅞x3⅛	235	6.6	192	93–3100	4–2¾x5⅛	Y	Own	4	□Own	HyF	H	**	–6.17	Own	O41H	330	478	Co	2I	.....	7▲x2⅜¼x¼	P
68	Corbitt (T)..18TG		137	137	18000	z7200	9.00/20	10.00/20	Con M6330	6–4x4¼	330	5.7	240	102–2800	7–2⅛x12	Y	Fu 5A330	5	Tim 56410PA	SF	H	**	–6.17	Tim 32502TW	Ws4IA	.....	744	a	TX	60½	7¾x3¼x☆	T
69	(T).....22TG		145	145	22000	z8500	10.00/20	10.00/22	Con B6427	6–4⅛x4⅞	427	6.1	332	127–2600	7–2⅞x13½	Y	Fu 5A43	5	Tim 58300PA	SF	H	**	–5.25	Tim 35000TW	Ws4IA	.....	847	a	TX	60½	8x3¼x¼	T
70	(T).....25TG		148	148	25000	z9600	10.00/22	11.00/22	Con R6513	6–4½x5⅜	513	5.9	400	165–2600	7–3¼x14½	Y	Fu 5A620	5	Tim 58415PA	SF	H	**	–6.14	Tim 35100TW	Ws4IA	.....	946	a	2	60½	8½x3¼x☆	T
71	(T).....28TG		148	148	28000	z9800	10.00/22	11.00/24	Con R6602	6–4⅞x5¾	602	6.0	460	185–2600	7–3¾x14½	Y	Fu 5A650	5	Tim 8200PA	2F	H	**	–6.42	Tim 26450W	Ws4IA	.....	1159	a	TD	60½	8½x3¼x☆	T
72	(D) (T) ...22TD		145	145	22000	z8700	10.00/20	10.00/22	Her DWXD	6–4¼x4¾	404	...	330	146–2600	7–.....	Y	Fu 5A430	5	Tim 98415PA	dF	H	6.53	–8.53	Tim 35000TW	Ws4IA	.....	847	a	TX	60½	8x3¼x¼	T
73	(D) (T) ...25TD		148	148	25000	z9800	10.00/22	11.00/22	Her DRXC	6–4⅜x5¼	529	...	400	140–2000	7–3½x13¾	Y	Fu 5A620	5	Tim 98415PA	dF	H	6.53	–8.53	Tim 35100TW	Ws4IA	.....	946	a	2	60½	8½x3¼x☆	T

z Weight of complete truck tractor less fifth wheel. □ Chevrolet own rear axle (6.17:1) available at extra cost on Models PJ-PK-PL. Chevrolet own 2-speed rear axle (6.03-7.99:1) available at extra cost on Models PVS-PWS-PR-PS-PV-PW. ▲ Max. gross vehicle weight can only be obtained by adding regular productive options (at extra cost). ▼ Rating applies with 3rd axle. ▽ or Fu 3A92 with 3 forward speeds.
▲ Includes Cab. ♦ Front; rear 14.00/24. † Dump truck models.

Line Number	MAKE AND MODEL	Chassis List Price	WHEEL-BASE Minimum Standard	WHEEL-BASE Maximum Standard	Gross Vehicle Weight for Normal Service	Chassis Weight (See definition)	TIRE SIZES D-dual rear S-single rear Standard Front and Rear	TIRE SIZES Maximum Authorized Tire Size (Duals unless noted)	ENGINE DETAILS Make and Model	No. of Cylinders, Bore and Stroke	Displacement	Comp. Ratio	Torque lb. ft.	Max. Brake H.P. at R.P.M. Given	Main Bearings Number, Diameter and Length	Governor Standard	TRANSMISSION Make and Model	TRANSMISSION Forward Sp'ds	REAR AXLE Make and Model	REAR AXLE Gear and Type	REAR AXLE Drive & Torque	REAR AXLE Gear Ratio Range in High	FRONT AXLE Make and Model	BRAKES SERVICE Make Location Type Operat'n	BRAKES SERVICE Lining Area	BRAKES SERVICE Drum Area	BRAKES SERVICE Drum Material	BRAKES Hand Location Type	C-A Dimension (Min. Std. W. B.)	FRAME Side Rail Dimensions	FRAME Type
1	Corbitt Cont'd															Y		5													
2	(D) (T) . . . 27TD		152	152	27000	x10000	10.00/22	11.00/24	Cum HB6	6–4⅞x6	672	17.	500	150–1800	7–4½x16½	Y	Fu 5A420	5	Tim 58415PA	SF	H	** –5.14	Tim 26450W	Ws4IA	....	1055	a	2	60½	8¼x3¼x⅜	T
3	(D) (T) . . . 28TD		155	155	28000	x10400	10.00/22	11.00/24	Cum NHB6	6–5½x6	742	. . .	575	200–2100	7.	Y	Fu 5A920	5	Tim S200PA	2F	H	** –6.42	Tim 26450W	Ws4IA	....	1159	a	TD	60½	8¼x3¼x⅜	T
4	. . . . . 18BG		137	Opt	18000	. . . . .	9.00/20	10.00/20	Con M6330	6–4x4⅜	330	5.7	240	102–2800	7–2¼x12	Y	Fu 5A430	5	Tim 56410H	SF	H	** –6.17	Tim 32502H	L4IHV	....	578	a	TX	. . . .	8x3¼x¼	T
5	. . . . . 22BG		145	Opt	22000	. . . . .	10.00/20	10.00/22	Con B6371	6–4⅛x4⅝	371	5.7	280	100–2500	7–2⅛x13½	Y	Fu 5A430	5	Tim 58300H	SF	H	** –6.14	Tim 35000H	L4IHV	....	660	a	TX	. . . .	8x3¼x¼	T
6	. . . . . 25BG		148	Opt	25000	. . . . .	10.00/22	11.00/22	Con B6427	6–4⅜x4⅞	427	6.1	332	127–2600	7–2⅞x13½	Y	Fu 5A430	5	Tim 58415PA	SF	H	** –6.14	Tim 35100TW	Ws4IA	....	946	a	TX	. . . .	8¼x3¼x⅜	T
7	. . . . . 28BG		148	Opt	28000	. . . . .	11.00/22	11.00/24	Con R6513	6–4½x5⅜	513	5.9	400	165–2600	7–3¼x14½	Y	Fu 5A620	5	Tim S200PA	2F	H	** –6.42	Tim 26450W	Ws4IA	....	1159	a	TD	. . . .	10½x3x¼	T‡
8	(D) 18BD		137	Opt	18000	. . . . .	9.00/20	10.00/20	Her DJXC	6–3¾x4½	298	. . .	208	83–2600	7–3x10⅜	Y	Fu 5A430	5	Tim 96710PA	dF	H	6.08–8.12	Tim 32502TW	Ws4IA	....	744	a	TX	. . . .	8x3¼x¼	T
9	(D) 25BD		148	Opt	25000	. . . . .	10.00/22	11.00/22	Her DWXD	6–4¼x4¾	404	. . .	330	146–2600	7–.		Fu 5A430		Tim 98415PA	dF	H	6.53–8.53	Tim 35000TW	Ws4IA	....	847	a	TX	. . . .	8¼x3¼x⅜	T
10	Diamond T.404HH		139	175	14700	5000	8.25/20D	8.25/20	Her CBJXE	6–3¼x4¼	245	5.7	174	77–2800	7–2½x10‡‡	Y	WG T9A	4	Eat A35-1350	SF	H	Dual Rge.	Cla F450	L4IHV	363	522	A	TX	60	8⅜x3½x¼	T
11	 509		139	175	14700	5200	8.25/20D	8.25/20	Her CBJXC◆	6–3½x4¼	282	5.9	214	86–2800	7–2½x10‡‡	Y	WG T9A	4	Eat A35-1350	SF	H	Dual Rge.	Cla F450	L4IHV	363	. . . .	A	TX	60	8⅜x3½x¼	T
12	. . . . . 509SC		106	151	14700	5300	8.25/20D	8.25/20	Her CBJXC◆	6–3¾x4¾	282	5.9	214	86–2800	7–2½x10‡‡		Cla 250V	5	Eat A34-18000	SF	H	Dual Rge.	Cla F450	L4IHV	481	. . . .	A	TD	60	8⅜x3½x¼	T
13	. . . . . 614H		139	175	18800	6200	9.00/20	9.00/20	Her CBJXD	6–4x4¼	320	5.9	228	96–2800	7–2½x10‡‡																
14	 702		130	142	23000	8200	10.00/20D	10.00/20	Her WXLC-3	6–4¼x4¾	404	5.9	300	114–2800	7–2⅝x13¼	Y	Cla 270V	5	Eat A30-18001	SF	R	Dual Rge.	Tim 35100TW	Ws4IA	618	. . . .	A	TD	60	10x3½x¼	T
15	. . . . . 806H		154	190	28000	9400	11.00/20D	11.00/20	Her WXLC3	6–4¼x4¾	404	5.9	300	114–2800	7–2⅝x13¼	Y	Spl 6241-6031	12	Tim U200P	SF	R	** –7.84	Tim 35100TW	Ws4IA	722	. . . .	A	TD	84	10¼x3¼x⅜	T
16	 900		154	154	30000	10000	10.00/22D	10.00/22	Her RXLC	6–4⅝x5¼	529	5.4	365	132–2100	7–3½x13¼	Y	Spl 6241-703	12	Tim U200P	2F	R	** –7.08	Tim 36021TW	Ws4IA	722	. . . .	A	TD	84	10¼x3¼x⅜	T
17	(D) 910		172	172	36000	12300	10.00/22D	10.00/20	Cum HB600	6–4¾x6	672	17.	500	150–1800	7–4½x16¾	Y	Spl 7851, 703	15	Tim U200P	2F	R	** –7.08	Tim 36021TW	Ws4IA	722	. . . .	A	TD	90½	10¼x3¼x⅜	T
18	Dodge . . . . . WC		116	116	4200	. . . . .	6.00/16	5.25/20S	Own	6–3¼x4⅜	217	6.8	172	95–3600	4–2½x4‡‡	N	NP	3	Own	HyS	H	3.70–4.70	Own	O4IH	148	251	CI	TX	40‡‡	6⅜x2⅜x⅜	. . . .
19	. . . . . WD15		120	120	5200	. . . . .	. . . . .	. . . . .	Own	6–3½x4½	217	6.8	172	95–3600	4–2½x4‡‡	N	NP	3	Own	HyS	H	3.73–4.78	Own	O4IH	183	276	CI	TX	40‡‡	6⅜x2⅜x⅜	. . . .
20	. . . . . WF31		135	135	13500	. . . . .	6.00/20‡	8.25/20	Own	6–3⅞x4¼	236	6.8	190	115–3800	4–2½x5‡‡	N	NP	4	Own	HyF	H	5.10–6.80	Own	O4IH	252	406	CI	TX	60	7x2¾x.21	P
21	. . . . . WF32		160	160	13500	. . . . .	6.00/20‡	8.25/20	Own	6–3⅞x4¼	236	6.8	190	115–3800	4–2½x5‡‡	N	NP	4	Own	HyF	H	5.10–6.80	Own	O4IH	252	406	CI	TX	84‡‡	7x2¾x.21	C
22	. . . . . WFM38		159	159	13500	. . . . .	6.00/20‡	8.25/20	Own	6–3⅞x4¼	236	6.8	190	115–3800	4–2½x5‡‡	N	NP	4	Own	HyF	H	5.10–6.80	Own	O4IH	252	406	CI	TX	114	7½x2‡‡x⅜	P
23	. . . . . WFA31		135	135	14000	. . . . .	6.00/20‡	8.25/20	Own	6–3⅞x4¼	236	6.8	190	115–3800	4–2½x5‡‡	N	NP	4	Eat	SFd	H	Dual Rge.	Own	O4IH	252	406	CI	TX	60	7x2¾x.21	P
24	. . . . . WFA32		160	160	14000	. . . . .	6.00/20‡	8.25/20	Own	6–3⅞x4¼	236	6.8	190	115–3800	4–2½x5‡‡	N	NP	4	Eat	SFd	H	Dual Rge.	Own	O4IH	252	406	CI	TX	84‡‡	7x2¾x.21	. . . .
25	. . . . . WH47		160	160	15000	. . . . .	6.50/20	8.25/20	Own	6–3⅞x4½	250	6.8	200	120–3800	4–2½x5‡‡	N	NP	5	Own	HyF	H	5.10–7.10	Own	O4IHV	335	609	CI	TX	84‡‡	8⅜x3‡‡x⅜	. . . .
26	. . . . . WH45		136	136	15000	. . . . .	6.50/20	8.25/20	Own	6–3⅞x4½	250	6.8	200	120–3800	4–2½x5‡‡	N	NP	5	Own	HyF	H	5.10–7.10	Own	O4IHV	335	609	CI	TX	60‡‡	8⅜x2‡‡x⅜	P
27	. . . . . WHA45		136	136	16000	. . . . .	6.50/20	8.25/20*	Own	6–3⅞x4½	250	6.8	200	120–3800	4–2½x5‡‡	N	NP	5	Eat	SFd	H	Dual Rge	Own	O4IHV	335	609	CI	TX	60‡‡	8⅜x2‡‡x⅜	P
28	. . . . . WFMA38		159	159	14000	. . . . .	6.50/20	8.25/20	Own	6–3¼x4¼	236	6.8	190	115–3800	4–2½x5‡‡	N	NP		Eat	SFd	H	Dual Rge.	Own	O4IH	252	406	CI	TX	114	7½x2‡‡x⅜	. . . .
29	. . . . . WD20		120	120	6400	. . . . .	6.50/16▲	6.50/16	Own	6–3¼x4⅜	230	6.8	184	105–3600	4–2½x4‡‡	N	NP	3	Own	HyF	H	3.90–4.89	Own	O4IH	190	293	CI	TX	44‡‡	6¼x2⅛x⅜	. . . .
30	. . . . . WD21		133	133	6400	. . . . .	6.50/16▲	6.50/16	Own	6–3¼x4¼	230	6.8	184	105–3600	4–2½x4‡‡	N	NP	3	Own	HyF	H	3.90–4.89	Own	O4IH	190	293	CI	TX	57‡‡	6¼x2⅛x⅜	. . . .
31	. . . . . WF33		190	190	13500	. . . . .	6.00/20‡	8.25/20	Own	6–3⅞x4¼	236	6.8	190	115–3800	4–2½x5‡‡	N	NP	4	Own	HyF	H	5.10–6.80	Own	O4IH	252	406	CI	TX	114	7½x2‡‡x¼	. . . .
32	. . . . . WFA33		190	190	14000	. . . . .	6.00/20‡	8.25/20	Own	6–3⅞x4¼	236	6.8	190	115–3800	4–2½x5‡‡	N	NP	4	Eat	SFd	H	Dual Rge.	Own	O4IH	252	406	CI	TX	114	7½x2‡‡x¼	. . . .
33	. . . . . WH46		148	148	15000	. . . . .	6.50/20	8.25/20	Own	6–3⅞x4½	250	6.8	200	120–3800	4–2½x5‡‡	N	NP	5	Own	HyF	H	5.10–7.10	Own	O4IHV	335	609	CI	TX	72‡‡	8⅜x2‡‡x⅜	. . . .
34	. . . . . WHA46		148	148	16000	. . . . .	6.50/20	8.25/20*	Own	6–3⅞x4½	250	6.8	200	120–3800	4–2½x5‡‡	N	NP	5	Eat	SFd	H	Dual Rge	Own	O4IHV	335	609	CI	TX	72‡‡	8⅜x2‡‡x⅜	. . . .
35	. . . . . WHA47		160	160	16000	. . . . .	6.50/20	8.25/20*	Own	6–3⅞x4½	250	6.8	200	120–3800	4–2½x5‡‡	N	NP	5	Eat	SFd	H	Dual Rge	Own	O4IHV	335	609	CI	TX	84‡‡	8⅜x2‡‡x⅜	. . . .
36	. . . . . WH48		178	178	15000	. . . . .	6.50/20	8.25/20*	Own	6–3⅞x4½	250	6.8	200	120–3800	4–2½x5‡‡	N	NP	5	Own	HyF	H	5.10–7.10	Own	O4IHV	335	609	CI	TX	102‡‡	8⅜x2‡‡x⅜	. . . .
37	. . . . . WHA48		178	178	16000	. . . . .	6.50/20	8.25/20*	Own	6–3⅞x4½	250	6.8	200	120–3800	4–2½x5‡‡	N	NP	5	Eat	SFd	H	Dual Rge	Own	O4IHV	335	609	CI	TX	102‡‡	8⅜x2‡‡x⅜	. . . .
38	. . . . . WH49		220	220	15000	. . . . .	6.50/20	8.25/20	Own	6–3⅞x4½	250	6.8	200	120–3800	4–2½x5‡‡	N	NP	5	Own	HyF	H	5.10–7.10	Own	O4IHV	335	609	CI	TX	144‡‡	8⅜x2½x⅜	. . . .
39	. . . . . WHA49		220	220	16000	. . . . .	6.50/20	8.25/20*	Own	6–3⅞x4½	250	6.8	200	120–3800	4–2½x5‡‡	N	NP	5	Eat	SFd	H	Dual Rge.	Own	O4IHV	335	609	CI	TX	144‡‡	8⅜x2½x⅜	. . . .
40	. . . . . WHM45		105	105	15000	. . . . .	6.50/20	8.25/20	Own	6–3⅞x4½	250	6.8	200	120–3800	4–2½x5‡‡	N	NP	5	Own	HyF	H	5.10–7.10	Own	O4IHV	335	609	CI	TX	60	8⅜x2‡‡x⅜	. . . .
41	. . . . . WHMA45		105	105	16000	. . . . .	6.50/20	8.25/20*	Own	6–3⅞x4½	250	6.8	200	120–3800	4–2½x5‡‡	N	NP	5	Eat	SFd	H	Dual Rge	Own	O4IHV	335	609	CI	TX	60	8⅜x2‡‡x⅜	. . . .
42	. . . . . WHM48		159	159	15000	. . . . .	6.50/20	8.25/20	Own	6–3⅞x4½	250	6.8	200	120–3800	4–2½x5‡‡	N	NP	5	Own	HyF	H	5.10–7.10	Own	O4IHV	335	609	CI	TX	114	8⅜x2½x⅜	. . . .
43	. . . . . WHMA48		159	159	16000	. . . . .	6.50/20	8.25/20*	Own	6–3⅞x4½	250	6.8	200	120–3800	4–2½x5‡‡	N	NP	5	Eat	SFd	H	Dual Rge	Own	O4IHV	335	609	CI	TX	114	8⅜x2½x⅜	. . . .
44	. . . . . WFM35		105	105	13500	. . . . .	6.50/20	8.25/20	Own	6–3⅞x4¼	236	6.8	190	115–3800	4–2½x5‡‡	N	NP	4	Own	HyF	H	5.10–6.80	Own	O4IH	252	406	CI	TX	60	7x2¾x⅜	. . . .
45	. . . . . WFMA35		105	105	14000	. . . . .	6.50/20	8.25/20	Own	6–3⅞x4¼	236	6.8	190	115–3800	4–2½x5‡‡	N	NP	4	Eat	SFd	H	Dual Rge.	Own	O4IH	252	406	CI	TX	60	7x2¾x⅜	. . . .
46	. . . . . WFM37		129	129	13500	. . . . .	6.50/20	8.25/20	Own	6–3⅞x4¼	236	6.8	190	115–3800	4–2½x5‡‡	N	NP	4	Own	HyF	H	5.10–6.80	Own	O4IH	252	406	CI	TX	84	7⅞x2‡‡x¼	. . . .
47	. . . . . WFMA37		129	129	14000	. . . . .	6.50/20	8.25/20	Own	6–3⅞x4¼	236	6.8	190	115–3800	4–2½x5‡‡	N	NP	4	Eat	SFd	H	Dual Rge.	Own	O4IH	252	406	CI	TX	84	7⅞x2‡‡x¼	. . . .
48	Duplex . . . . . T		136	190	18000	6000	7.50/20D	9.00/20	Her JXD	6–4x4¼	320	6.2	240	113–3000	7–2½x10‡‡	Y	Fu 5B33	5	Tim 56410	2F	H	** –6.83	Tim 32502	L4IHV	420	654	A	TX	59	9x3½x⅜	C
49	. . . . . R		144	190	25000	8820	8.25/20D	10.00/20	Her WXLC-3	6–4¼x4¾	404	5.8	290	139–2600	7–2⅝x13¼	Y	Fu 5A43	4	Tim 98415	2F	R	6.53–8.53	Tim 35000	L4IHV	730	1016	A	TX	79¼	9x3½x⅜	C
50	. . . . . JH		166	210	28000	9800	10.00/20D	11.00/20	Her RXB	6–4½x5¼	501	5.4	360	121–2200	7–3x14	Y	Fu 5A620	5	Tim S-200P	2F	R	** –9.81	Tim 26450	Ws4IA	912	1311	A	TX	79	10¼x3¼x⅜	C
51	. . . . . KH		166	210	32000	10500	10.00/20D	11.00/20	Her RXC	6–4⅝x5¼	529	5.4	395	132–2200	7–3x14¼	Y	Fu 5A620	5	Tim U-200	2F	R	** –9.81	Tim 26450	Ws4IA	912	1311	A	TX	79	10¼x3¼x⅜	C
52	Federal 18M		146	194	15000	4700	8.25/20D	. . . . .	Her JXBF	6–3⅝x4¼	263	6.5	189	93–3000	7–2½x10‡‡	N	WG T9	4	Tim 54412DP	SF	H	** –5.83	Tim 30003H	LT4IHV	314	532	a	TX	67	8¼x2¼x⅜	*T
53	. . . . . 18M2		146	194	15000	4830	8.25/20D	. . . . .	Her JXBF	6–3⅝x4¼	263	6.5	189	93–3000	7–2½x10‡‡	N	WG T9	4	Tim 94440DP	dF	H	6.06–8.11	Tim 30003H	LT4IHV	314	532	a	TX	67	8¼x2¼x⅜	*T
54	. . . . . 29M		146	194	20000	5500	9.00/20D	. . . . .	Her JXDF	6–4x4¼	320	6.5	230	109–2800	7–2½x10‡‡	N	Cla 205V	5	Tim 56410DP	SF	H	** –6.83	Tim 32514H	LT4IHV	390	654	a	TX	67	8¼x2¼x⅜	*T
55	. . . . . 29M2		146	194	20000	5690	9.00/20D	. . . . .	Her JXDF	6–4x4¼	320	6.5	230	109–2800	7–2½x10‡‡	N	Cla 205V	5	Tim 96710DP	dF	H	6.07–8.12	Tim 32514H	LT4IHV	390	654	a	TX	67	8¼x2¼x⅜	*T
56	. . . . . 29MA		155	194	20000	5950	9.00/20D	. . . . .	Her JXDF	6–4x4¼	320	6.5	230	109–2800	7–2½x10‡‡	N	Cla 205V†	5	Tim 58301DP	SF	H	** –6.83	Tim 32514H	LT4IHV	466	820	a	TD	76	8¼x2¼x⅜	*T
57	. . . . . 45M		143	203	24000	7975	10.00/20D	. . . . .	Con B6427	6–4⅜x4⅞	427	6.1	332	128–2600	7–2⅞x13½	Y	Cla 270VO	5	Tim 58301P	SF	R	** –6.83	Tim 35011TW	TW4IA	606	933	a	TD	60½	10x3½x¼	*T
58	. . . . . 45M2		143	203	24000	8350	10.00/20D	. . . . .	Con B6427	6–4⅜x4⅞	427	6.1	332	128–2600	7–2⅞x13½	Y	Cla 270VO	5	Tim 98415P	dF	R	6.53–8.53	Tim 35011TW	TW4IA	606	933	a	TD	60½	10x3½x¼	*T
59	. . . . . 55M		143	203	27000	8600	11.00/20D	. . . . .	Con B6427	6–4⅜x4⅞	427	6.1	332	128–2600	7–2⅞x13½	Y	Cla 270VO	5	Tim S-200P	2F	R	** –7.08	Tim 36021TW	TW4IA	722	1051	a	TD	60½	10x3½x¼	*T
60	. . . . . 55MA		155	203	27000	8880	11.00/20D	. . . . .	Con B6427	6–4⅜x4⅞	427	6.1	332	128–2600	7–2⅞x13½	Y	Cla 270V†	5	Tim S-200P	2F	R	** –7.08	Tim 36021TW	TW4IA	722	1051	a	TD	72½	10x3½x¼	*T
61	. . . . . 60MA		155	203	28000	9715	11.00/20D	. . . . .	Con 22R	6–4½x5¼	501	5.4	384	148–2400	7–2¾x14¼	Y	Cla 326V✦	5	Tim S-200P	2F	R	** –7.08	Tim 36021TW	TW4IA	722	1051	a	TD	72½	10x3½x¼	*T
62	. . . . . 60M2		143	203	28000	9690	11.00/20D	. . . . .	Con 22R	6–4½x5¾	501	5.4	384	148–2400	7–2¾x14¼	Y	Cla 326V	5	Tim S300P	dF	R	6.53–8.53	Tim 36021TW	TW4IA	722	1051	a	TD	60½	10x3½x¼	*T
63	Ford Chs.Cowl 69C	♦720	114	114	4700	^2360	6.50/16	6.50/16	Own 59C-V8	8–3⅛x3¾	239	6.7	180	100–3800	3–2½x4.96	N	Own 21C	3	Own 21C	S¾	H	** –3.54	Own 21Y	O4IH	162	264	Co	2IM	. . . .	5.92x.15x2½	CT
64	Chs.Windsld 69C	♦740	114	114	4700	^2390	6.50/16	6.50/16	Own 59C-V8	8–3⅛x3¾	239	6.7	180	100–3800	3–2½x4.96	N	Own 21C	3	Own 21C	S¾	H	** –3.54	Own 21Y	O4IH	162	264	Co	2IM	. . . .	5.92x.15x2½	CT
65	Chassis Cab 69C	♦780	114	114	4700	^2710	6.50/16	6.50/16	Own 59C-V8	8–3⅛x3¾	239	6.7	180	100–3800	3–2½x4.96	N	Own 21C	3	Own 21C	S¾	H	** –3.54	Own 21Y	O4IH	162	264	Co	2IM	40⅛	5.92x.15x2½	CT
66	Pickup 69C	♦800	114	114	4700	^3050	6.50/16	6.50/16	Own 59C-V8	8–3⅛x3¾	239	6.7	180	100–3800	3–2½x4.96	N	Own 21C	3	Own 21C	S¾	H	** –3.54	Own 21Y	O4IH	162	264	Co	2IM	40⅛	5.92x.15x2½	CT
67	Stake 69C	♦905	114	114	4700	^3170	6.50/16	6.50/16	Own 59C-V8	8–3⅛x3¾	239	6.7	180	100–3800	3–2½x4.96	N	Own 21C	3	Own 21C	S¾	H	** –3.54	Own 21Y	O4IH	162	264	Co	2IM	40⅛	5.92x.15x2½	CT
68	Panel 69C	♦935	114	114	4700	^3310	6.50/16	6.50/16	Own 59C-V8	8–3⅛x3¾	239	6.7	180	100–3800	3–2½x4.96	N	Own 21C	3	Own 21C	S¾	H	** –3.54	Own 21Y	O4IH	162	264	Co	2IM	. . . .	5.92x.15x2½	xCT
69	Sedan Dlvry 69C	♦990	114	114	4000	^3050	6.00/16	6.50/16	Own 59A-V8	8–3⅛x3¾	239	6.7	180	100–3800	3–2½x4.96	N	Own 41A	3	Own 51A	S¾	tr	** –3.54	Own 21A	O4IH	162	264	Co	2IM	. . . .	5.92x.15x2½	CT
70	Chs. Cowl . . 69Y	♦850	122	122	6600	^2860	7.00/17▽	7.00/17▽	Own 59Y-V8	8–3⅛x3¾	239	6.7	180	100–3800	3–2½x4.96	N	Own 11Y	4	Own 21Y	SF	H	** –4.85	Own 21Y	O4IH	187	308	Co	2IM	. . . .	6x.19x2¼	CT
71	Chs.Windsld 69Y	♦870	122	122	6600	^2890	7.00/17▽	7.00/17▽	Own 59Y-V8	8–3⅛x3¾	239	6.7	180	100–3800	3–2½x4.96	N	Own 11Y	4	Own 21Y	SF	H	** –4.85	Own 21Y	O4IH	187	308	Co	2IM	. . . .	6x.19x2¼	CT
72	Chassis Cab 69Y	♦945	122	122	6600	^3220	7.00/17▽	7.00/17▽	Own 59Y-V8	8–3⅛x3¾	239	6.7	180	100–3800	3–2½x4.96	N	Own 11Y	4	Own 21Y	SF	H	** –4.85	Own 21Y	O4IH	187	308	Co	2IM	48⅛	6x.19x2¼	CT
73	Express 69Y	♦1000	122	122	6600	^3690	7.00/17▽	7.00/17▽	Own 59Y-V8	8–3⅛x3¾	239	6.7	180	100–3800	3–2½x4.96	N	Own 11Y	4	Own 21Y	SF	H	** –4.85	Own 21Y	O4IH	187	308	Co	2IM	. . . .	6x.19x2¼	CT

† Main transmission; auxiliary, Brown-Lipe 6031, 3 forward speeds. ✦ Main transmission; auxiliary, Brown-Lipe 703, 3 forward speeds. ▲ Rear 7.00/16S * Rear 9.00/20D ‡ Rear 6.50/20D
* For other than minimum standard WB–8⅛x2⅞x¼. • For other than minimum standard WB–10½x3½x⅛. ◆Or CBJXB 6-3⅝x4¼ ♦ Cab and body included ^ Includes cab and body. ▽ Front only; rear 7.50/17.

Line Number	MAKE AND MODEL	Chassis List Price	WHEEL BASE Minimum Standard	WHEEL BASE Maximum Standard	Gross Vehicle Weight for Normal Service	Chassis Weight (See definition)	TIRE SIZES D-dual rear S-single rear Standard Front and Rear	TIRE SIZES Maximum Authorized Tire Size (Duals unless noted)	ENGINE DETAILS Make and Model	No. of Cylinders, Bore and Stroke	Displacement	Comp. Ratio	Torque lb. ft.	Max. Brake H.P. at R.P.M. Given	Main Bearings Number, Diameter and Length	Governor Standard	TRANSMISSION Make and Model	Forward Sp'ds	REAR AXLE Make and Model	REAR AXLE Gear and Type Drive & Torque	REAR AXLE Gear Ratio Range in High	FRONT AXLE Make and Model	BRAKES SERVICE Make Location Type Operation	BRAKES SERVICE Lining Area	BRAKES SERVICE Drum Area	BRAKES SERVICE Drum Material	BRAKES Hand Location Type	G-A Dimensions (Min. Std. W. B.)	FRAME Side Rail Dimensions	FRAME Type
1	Ford Cont'd																													
2	Stake.....69Y	♦1025	122	122	6600	△3835	7.00/17▽	7.00/17▽	Own 59Y-V8	8–3 7/8 x 3 1/4	239	6.7	180	100–3800	3–2 1/2 x 4.96	N	Own 11Y	4	Own 21Y	SF	H ** –4.85	Own 21Y	O4IH	187	308	Co	2IM	.....	6x.19x2 1/4	CT
3	Panel.....69Y	♦1115	122	122	6600	△3920	7.00/17▽	7.00/17▽	Own 59Y-V8	8–3 7/8 x 3 1/4	239	6.7	180	100–3800	3–2 1/2 x 4.96	N	Own 11Y	4	Own 21Y	SF	H ** –4.85	Own 21Y	O4IH	187	308	Co	2IM	.....	6x.19x2 1/4	CT
4	Chs. Cowl...69T	♦865	134	134	12500	△3990	7.50/20	8.25/20R	Own 59T-V8	8–3 7/8 x 3 1/4	239	6.7	180	100–3800	3–2 1/2 x 4.96	N	Own 41T	4	Own 01T	SF	H ** –6.66	Own 01T	O4IH	303	506	Co	TX	.....	7x.21x2 3/4	TL
5	Chs. Windsld 69T	♦885	134	134	12500	△4020	7.50/20	8.25/20R	Own 59T-V8	8–3 7/8 x 3 1/4	239	6.7	180	100–3800	3–2 1/2 x 4.96	N	Own 41T	4	Own 01T	SF	H ** –6.66	Own 01T	O4IH	303	506	Co	TX	.....	6.6x.12x2.2	TL
6	Chassis Cab. 69T	♦960	134	134	12500	△4330	7.50/20	8.25/20R	Own 59T-V8	8–3 7/8 x 3 1/4	239	6.7	180	100–3800	3–2 1/2 x 4.96	N	Own 41T	4	Own 01T	SF	H ** –6.66	Own 01T	O4IH	303	506	Co	TX	60 1/8	6.6x.12x2.2	TL
7	Stake.....69T	♦1095	134	134	12500	△5310	7.50/20	8.25/20R	Own 59T-V8	8–3 7/8 x 3 1/4	239	6.7	180	100–3800	3–2 1/2 x 4.96	N	Own 41T	4	Own 01T	SF	H ** –6.66	Own 01T	O4IH	303	506	Co	TX	.....	6.6x.12x2.2	TL
8	Dump Chs. Cl. 69U	♦♦873	134	134	12500	△3990	7.50/20	8.25/20R	Own 59T-V8	8–3 7/8 x 3 1/4	239	6.7	180	100–3800	3–2 1/2 x 4.96	N	Own 41T	4	Own 01T	SF	H ** –6.66	Own 01T	O4IH	303	506	Co	TX	.....	6.6x.12x2.2	TL
9	Dump Chs. W/s 69U	♦♦893	134	134	12500	△4020	7.50/20	8.25/20R	Own 59T-V8	8–3 7/8 x 3 1/4	239	6.7	180	100–3800	3–2 1/2 x 4.96	N	Own 41T	4	Own 01T	SF	H ** –6.66	Own 01T	O4IH	303	506	Co	TX	.....	6.6x.12x2.2	TL
10	Dump Chs. Cb. 69U	♦♦968	134	134	12500	△4335	7.50/20	8.25/20R	Own 59T-V8	8–3 7/8 x 3 1/4	239	6.7	180	100–3800	3–2 1/2 x 4.96	N	Own 41T	4	Own 01T	SF	H ** –6.66	Own 01T	O4IH	303	506	Co	TX	60 1/8	6.6x.12x2.2	TL
11	Chs. Cowl 698T	♦890	158	158	12500	△4070	7.50/20	8.25/20R	Own 59T-V8	8–3 7/8 x 3 1/4	239	6.7	180	100–3800	3–2 1/2 x 4.96	N	Own 41T	4	Own 01T	SF	H ** –6.66	Own 01T	O4IH	303	506	Co	TX	.....	6.6x.12x2.2	TL
12	Chs. Windsld. 698T	♦910	158	158	12500	△4100	7.50/20	8.25/20R	Own 59T-V8	8–3 7/8 x 3 1/4	239	6.7	180	100–3800	3–2 1/2 x 4.96	N	Own 41T	4	Own 01T	SF	H ** –6.66	Own 01T	O4IH	303	506	Co	TX	.....	6.6x.12x2.2	TL
13	Chassis Cab. 698T	♦985	158	158	12500	△4410	7.50/20	8.25/20R	Own 59T-V8	8–3 7/8 x 3 1/4	239	6.7	180	100–3800	3–2 1/2 x 4.96	N	Own 41T	4	Own 01T	SF	H ** –6.66	Own 01T	O4IH	303	506	Co	TX	84 1/8	6.6x.12x2.2	TL
14	Stake.....698T	♦1147	158	158	12500	△5650	7.50/20	8.25/20R	Own 59T-V8	8–3 7/8 x 3 1/4	239	6.7	180	100–3800	3–2 1/2 x 4.96	N	Own 41T	4	Own 01T	SF	H ** –6.66	Own 01T	O4IH	303	506	Co	TX	.....	6.6x.12x2.2	TL
15	Sch. Bus...698T	♦884	158	158	13500	△4090	7.50/20	8.25/20R	Own 594T-V8	8–3 7/8 x 3 1/2	239	6.7	180	100–3800	3–2 1/2 x 4.96	N	Own 41T	4	Own 01T	SF	H ** –6.66	Own 01T	O4IH	303	506	Co	TX	.....	6.6x.12x2.2	TL
16	Sch. Bus...694T	♦995	194	194	14500	△4260	7.50/20	8.25/20R	Own 594T-V8	8–3 7/8 x 3 1/2	239	6.7	180	100–3800	3–2 1/2 x 4.96	N	Own 41T	4	Own 01T	SF	H ** –6.66	Own 01T	O4IH	303	506	Co	TX	.....	6.6x.12x2.2	TL
17	(c.o.e.) Ch. C. 691W	♦1085	101	101	13500	△4437	7.50/20	8.25/20R	Own 59T-V8	8–3 7/8 x 3 1/4	239	6.7	180	100–3800	3–2 1/2 x 4.96	H	Own 41T	4	Own 01T	SF	H ** –6.66	Own 81W	O4IH	303	506	Co	TX	60	7x.21x2 3/4	TL
18	(c.o.e.) Ch. C. 69W	♦1105	134	134	13500	△4570	7.50/20	8.25/20R	Own 59T-V8	8–3 7/8 x 3 1/4	239	6.7	180	100–3800	3–2 1/2 x 4.96	N	Own 41T	4	Own 01T	SF	H ** –6.66	Own 81W	O4IH	303	506	Co	TX	93	7x.21x2 3/4	TL
19	(c.o.e.) Ch. C. 698W	♦1130	158	158	13500	△4645	7.50/20	8.25/20R	Own 59T-V8	8–3 7/8 x 3 1/4	239	6.7	180	100–3800	3–2 1/2 x 4.96	N	Own 41T	4	Own 01T	SF	H ** –6.66	Own 81W	O4IH	303	506	Co	TX	117	6.6x.12x2.2	TL
20	Hudson (3/4T. Pkp).....		128	128	4810	.....	6.50/16-6	6.50/16-6	Own 58	6–3x5	212	6.5	168	102–4000	3– ▲▲	N	Own	3	Own	S1/2	H ** –4.55	Own	B4IH	141	242	C	2I	42 1/2	7 1/8 x 1 3/4 x 1/8	B
21	Intern'l (2)....K-1	690	113	125	4400	2250	6.00/16-4	7.00/16	Own GRD214	6–3 1/8 x 4 1/4	213	6.3	160	82–3400	4–2 5/8 x 6 1/2	N	Own HD8	3	Own R1050	S1/2	H 3.72–5.11	Own F50	L4IH	164	316	e	FX	38	6x2 1/4 x 1/8	C
22	.....K-1-M	700	102	113	4600	2150	6.00/16-4	6.50/16-6	Own GRD214	6–3 1/8 x 4 1/4	213	6.3	160	82–3400	4–2 5/8 x 6 1/2	N	O SA-HD8-A	3	Own R1050	S1/2	H 3.72–5.11	Own F150	L4IH	164	316	e	FX	.....	6 1/8 x 2 1/4 x 1/2	C
23	.....K-2	695	125	125	5200	2285	6.00/16-4	7.00/16-6	Own GRD214	6–3 1/8 x 4 1/4	213	6.3	160	82–3400	4–2 5/8 x 6 1/2	N	Own HD8	3	Own R1050	S1/2	H 3.72–5.11	Own F50	L4IH	164	316	e	FX	50	6 1/8 x 2 1/4 x 1/2	C
24	.....K-3	810	130	....	6650	2970	7.00/16-6	7.50/16-6	Own GRD214	6–3 1/8 x 4 1/4	213	6.3	160	82–3400	4–2 5/8 x 6 1/2	N	Own HD8-A	3	Own R1150	SF	H 4.22–5.28	Own F150	L4IH	195	367	e	FX	55	6 1/8 x 2 1/4 x 1/2	C
25	.....K-3-M	.....	113	113	7000	2685	7.00/16-6	7.50/16-8	Own GRD214	6–3 1/8 x 4 1/4	213	6.3	160	82–3400	4–2 5/8 x 6 1/2	N	Own H41B	4	Own R1150	SF	H 4.22–5.28	Own F150	L4IH	221	367	e	TX	.....	6 1/8 x 2 1/4 x 1/2	C
26	(a) (b).....K-5	900	135	177	13500	3585	6.00/20D	8.25/20	O-GRD 233	6–3 7/8 x 4 1/2	233	6.3	181	93–3400	4–2 5/8 x 6 1/2	N	Own H41B	4	Own R1360	SF	H 5.28–7.16	Own F350	LH4IH	294	509	e	TX	60	8x3x 1/8	T
27	(a) (b).....K-6	1315	134	176	14500	4475	6.50/20-6	8.25/20-10	Own BLD250	6–3 1/8 x 4 1/2	251	6.3	200	100–3200	4–2 3/8 x 5 1/2	N	Own F51	5	Own R1450	SF	H 5.62–7.16	Own F470	LH41HV	368	633	e	TX	60	8 1/4 x 3 x 1/2	T
28	(a) (b).....K-7	1585	134	176	16500	4810	7.00/20D	9.00/20	O-BLD 269	6–3 7/8 x 4 1/2	269	6.3	222	100–3000	4–2. 7x5 1/2	N	Own F51	5	Own R1560	SF	H 6.50–7.16	Own F470	LH41HV	399	681	e	TX	60	8 1/4 x 3 x 1/2	T
29	(a) (b).....K-8	2400	137	197	20000	6155	7.50/20D	10.00/20	O-RED 361	6–4 1/8 x 4 1/2	361	6.3	282	126–3000	7–3 1/4 x 10 1/2	Y	Own F51	5	Own R1570	SF	H 6.43–8.51	Own F550	LH41HV	475	811	e	PX	60	8 1/2 x 3 1/2 x 1/2	T
30	(a) (b).....K-10	.....	149	197	22500	7195	9.00/20	11.00/20	Own RED401	6–4 1/8 x 5	401	6.3	318	140–2800	7–3 1/4 x 10 1/2	Y	Own F54	5	Own R1670	SF	H 6.43–8.05	Own F650	LH41HV	552	654	e	FX	72	9 1/4 x 3 1/2 x 1/2	T
31	(a) (b)....KR-11	4225	149	197	27000	8100	9.00/20D	12.00/20	O-RED 450	6–4 1/2 x 5	450	6.3	360	148–2600	7–3 1/4 x 10 1/2	Y	Own F54	5	Own R1700	2SF	H 6.42–8.05	Own F750	WW4IA	616	1030	G	PX	72	10x3 1/2 x 1/8	T
32	Kenworth (D)..521	.....	156	205	32000	12200	10.00/20	11.00/22	Cum NHB6	6–5 1/2 x 6	743	17.	565	200–2100	7–4 1/2 x 16 1/2	Y	BL 7841	4	Tim U200P	DR	H 6.42–7.84	Tim 36000TW	Ws4IA	752	1050	a	TD	72	9 1/2 x 3 1/2 x 1/8	C
33	(D).....522	.....	187	245	43000	12900	10.00/20	.....	Cum HB6	6–4 1/2 x 6	672	17.	500	150–1800	7–4 1/2 x 16 1/2	Y	BL 7841	4	Tim U200P	.....	.....	Tim 36000TW	Ws4IA	1135	.....	.....	.....	.....	9 1/2 x 3 1/2 x 1/8	.....
34	586	.....	150	215	23000	10500	10.00/20	.....	Bu LO525	6–4 1/2 x 5 1/2	525	5.5	385	135–2200	.....	.....	Fu 5A620	5	Tim 58415PA	.....	.....	Tim 35100TW	Ws4IA	672	.....	.....	.....	.....	9 1/2 x 3 1/2 x 1/8	.....
35	587	.....	150	215	29000	10130	10.00/20	.....	Bu LO525	6–4 1/2 x 5 1/2	525	5.5	385	135–2200	.....	.....	Fu 5A620	5	Tim U200P	.....	.....	Tim 35100TW	Ws4IA	752	.....	.....	.....	.....	9 1/2 x 3 1/2 x 1/8	.....
36	Reo.....19BHS	.....	145	145	14000	4349	8.25/20D	8.25/20	Own GC245	6–3 1/2 x 4 1/2	245	6.2	191	89–3100	7–2 5/8 x 10. 6	Y	Cla 185F	4	Tim 94427	2	H 6.06–8.12	Tim 30000	L4IHV	327	478	e	TX	84	9x3x 1/4	T
37	.....19BHS	.....	145	145	14000	4205	7.50/20D	8.25/20	Own GC245	6–3 1/2 x 4 1/2	245	6.2	191	89–3100	7–2 5/8 x 10. 6	Y	Cla 185F	4	Tim 54412	SF	H ** –6.8	Tim 30000	L4IHV	327	478	e	TX	84	9x3x 1/4	T
38	.....19CHS	.....	165	165	14000	4402	8.25/20D	8.25/20	Own GC245	6–3 1/2 x 4 1/4	245	6.2	191	89–3100	7–2 5/8 x 10. 6	Y	Cla 185F	4	Tim 54412	SF	H ** –6.8	Tim 30000	L4IHV	327	478	e	TX	105	9x3x 1/4	T
39	.....20BHS	.....	145	165	15500	5147	8.25/20D	9.00/20	Own GC288	6–3 1/2 x 5	288	6.2	221	94–3000	7–2 5/8 x 10. 6	Y	Cla 205V	5	Tim 56427	SF	H ** –6.16	Tim 31104	L4IHV	402	....	c	TX	84	9x3x 1/4	T
40	.....20XHS	.....	130	130	15500	4985	8.25/20D	9.00/20	Own GC288	6–3 1/2 x 5	288	6.2	221	94–3000	7–2 5/8 x 10. 6	Y	Cla 205V	4	Tim 94427	SF	H ** –6.16	Tim 31000	L4IHV	402	....	c	TX	69 1/2	9 1/4 x 3 1/8 x 1/2	T
41	.....20XHS	.....	130	130	15500	4842	8.25/20D	9.00/20	Own GC288	6–3 1/2 x 5	288	6.2	221	94–3000	7–2 5/8 x 10. 6	Y	Cla 205V	2	Tim 96000	2	H 6.06–8.12	Tim 31000	L4IHV	402	....	c	TX	70	9 1/4 x 3 1/8 x 1/2	T
42	.....25VBS	.....	145	145	24000	7655	10.00/20D	10.00/20	Con 6427	6–4 3/8 x 4 7/8	427	6.1	324	127–2600	7–2 3/4 x 11 1/2	Y	Cla 270V■	5	Tim S-200P	2F	H ** –7.84	Tim 35000	Ws4IA	476	....	c	TX	85	9 1/4 x 3 1/8 x 1/2	T
43	.....25VBS	.....	145	145	24000	7505	10.00/20D	10.00/20	Con 6427	6–4 3/8 x 4 7/8	427	6.1	324	127–2600	7–2 3/4 x 11 1/2	Y	Cla 270V	5	Tim S-200P	2F	H ** –7.84	Tim 35000	Ws4IA	476	....	c	TX	85	9 1/4 x 3 1/8 x 1/2	T
44	.....25VXS	.....	130	130	24000	7445	10.00/20D	10.00/20	Con 6427	6–4 3/8 x 4 1/8	427	6.1	324	127–2600	7–2 3/4 x 11 1/2	Y	Cla 27VO	5	Tim 98415	2	H 6.53–8.53	Tim 35000	Ws4IA	604	....	c	TX	70	9 1/4 x 3 1/8 x 1/2	T
45	Sterling....HD115	.....	155	185	32000	10200	10.00/20D	11.00/20	Con R6513	6–4 1/2 x 5 3/8	513	5.9	400	156–2600	7–3 1/4 x 14 1/8	Y	Fu 5A625	15	Tim S-2000P	2F	R ** –7.84	Rim 26450W	Ws4IA	800	1286	a	TX	76	9x3 1/4 x 1/4	A
46	.....HC115	.....	155	185	32000	10100	10.00/20D	11.00/24	Wau 6SRKR	6–4 5/8 x 5 1/2	517	5.5	369	125–2250	7–3x13 1/4	Y	Fu 5A625	15	Own 137W	C2	R 7.40–9.38	Tim 26450W	Ws4IA	726	1240	a	TX	76	9x3 1/4 x 1/4	A
47	(D).....HC115H	.....	176	211	32000	12000	10.00/20D	11.00/24	Cum HB600	6–4 7/8 x 6	672	17.	500	150–1800	7–4 1/2 x 16 1/2	Y	Fu 4B865	12	Own 137W	C2	R 5.56–9.27	Tim 26450W	Ws4IA	726	1240	a	TX	88	9x3 1/4 x 1/4	A
48	.....HC144	.....	155	175	36000	10500	10.00/22D	12.00/24	Wau 6SRKR	6–4 5/8 x 5 1/4	517	5.5	369	125–2250	7–3x13 1/4	Y	Fu 5A625	15	Own 144W	C2	R 8.27–9.38	Tim 26450W	Ws4IA	786	1278	a	TX	76	9 1/4 x 3 3/8 x 5/8	A
49	.....HC145	.....	155	175	36000	10500	10.00/22D	12.00/24	Wau 6SRKR	6–4 5/8 x 5 1/4	517	5.5	369	125–2250	7–3x13 1/4	Y	Fu 5A625	15	Own 146W	C2	R 8.27–9.38	Tim 26450W	Ws4IA	786	1278	a	TX	76	9 1/4 x 3 3/8 x 5/8	A
50	.....HC147	.....	155	....	36000	10900	10.00/22D	12.00/24	Wau 6SRKR	6–4 5/8 x 5 1/4	517	5.5	369	125–2250	7–3x13 1/4	Y	Fu 5A625	15	Own 147W	C2	R 8.27–9.38	Tim 26450W	Ws4IA	786	1278	a	TX	76	9 1/4 x 3 3/8 x 5/8	A
51	.....HC156	.....	155	....	40000	11900	11.00/24D	12.00/24	Wau 6SRKR	6–4 5/8 x 5 1/4	517	5.5	369	125–2250	7–3x13 1/4	Y	Fu 5A625	15	Own 156W	C2	R 8.18–9.27	Tim 27454W	Ws4IA	786	1270	a	TX	76	9 1/4 x 3 3/8 x 5/8	A
52	.....HC165	.....	155	....	40000	12000	11.00/24D	12.00/24	Wau 6SRKR	6–4 5/8 x 5 3/8	517	5.5	369	125–2250	7–3x13 1/4	Y	Fu 5A625	15	Own 165W	C2	R 8.18–9.27	Tim 27454W	Ws4IA	786	1270	a	TX	76	9 1/4 x 3 3/8 x 5/8	A
53	(D).....HC165H	.....	165	175	40000	13500	11.00/24D	12.00/24	Cum HBD600	6–4 7/8 x 6	672	17.	500	150–1800	7–4 1/2 x 16 1/2	Y	Fu 4B865	12	Own 165W	C2	R 8.18–9.27	Tim 27454W	Ws4IA	786	1270	a	TX	77	9 1/4 x 3 3/8 x 5/8	A
54	(D).....HC175H	.....	165	175	45000	14000	12.00/24D	13.00/24	Cum HBD600	6–4 7/8 x 6	672	17.	500	150–1800	7–4 1/2 x 16 1/2	Y	Fu 4B865	12	Own 175W	C2	R 8.18–9.27	Tim 27454W	Ws4IA	786	1270	a	TX	77	9 1/4 x 3 3/8 x 5/8	A
55	Stewart.....47B	.....	134	205	13000	4900	6.50/20	8.25/20	Wau 6BM	6–3 1/8 x 4 1/4	262	5.7	175	77–2800	7–2 5/8 x 10 1/4	N	WG T9	4	Cla R950	BF	H 6.37–6.88	Cla F268	L4IHV	285	512	e	T	54	8 1/2 x 2 3/4 x 1/4	T
56	.....49B	.....	144	224	19500	5950	7.00/20	9.00/20	Wau 6BZ	6–4x4 1/4	318	5.7	210	86–3000	7–2 5/8 x 10 1/8	Y	Fu 5B330	5	Tim 56400	SF	R 6.83–7.80	Cla 450	L4IHV	408	742	E	T	64	10x2 3/4 x 1/8	T
57	.....58B	.....	140	228	22000	7100	7.50/20	11.00/20	Wau 6MZA	6–4 1/4 x 4 3/4	404	5.3	300	105–2500	7–2 5/8 x 12 1/2	Y	Fu 5B430	5	Eat 1801	SF	R ** –7.16	Tim 35000	L4IHV	478	848	E	T	64 1/2	10x2 3/4 x 1/8	T
58	.....59B	.....	140	228	25000	7490	8.25/20	11.00/20	Wau 6MZA	6–4 1/4 x 4 3/4	404	5.3	300	105–2500	7–2 5/8 x 12 1/2	Y	Fu 5B430	5	Eat 2680	2F	R ** –8.50	Tim 35100	L4IHV	510	990	E	T	64 1/2	10x2 3/4 x 1/8	T
59	.....38B	.....	140	228	27000	8250	9.00/20	11.00/20	Wau 6SRKR	6–4 1/2 x 5 1/4	517	5.5	369	110–2400	7–3x13 1/4	Y	Fu 5A620	5	Tim 200V	2F	R 7.37–8.64	Eat 570	L4IHV	510	990	E	T	64	10x2 3/4 x 1/8	T
60	Studebaker....M5	.....	113	113	4500	2160	6.50/16S	6.50/16S	Own 1M	6–3x4	170	6.5	134	80–4000	4–2 1/8 x 5 1/8	N	Own 664949	3	Own 663597	Hy	H ** –4.82	Own 664307	L4IH	157	276	Co	2I	45 1/2	7 1/8 x 2 1/8 x 1/8	T
61	.....M15A-20	.....	120	120	7800	2850	7.00/17S	7.00/20S	Own 2M	6–3x4	170	6.5	134	80–4000	4–2 1/8 x 5 1/8	N	Own 673674	4	Own 664435	SF	H 5.66–6.60	Own 673625	L4IH	216	342	a	TX	52 1/2	7 1/8 x 2 1/8 x 1/8	T
62	.....M15A-28	.....	128	128	10000	3085	7.50/17S	7.50/20S	Own 2M	6–3x4	170	6.5	134	80–4000	4–2 1/8 x 5 1/8	N	Own 673674	4	Own 665174	SF	H 6.60–5.66	Own 673625	L4IH	216	342	a	TX	52 1/2	8 1/8 x 2 1/8 x 1/8	T
63	.....M16	.....	128	195	13500	3685	7.00/20D	8.25/20	Own 3M	6–3 1/8 x 4 3/8	226	6.5	176	94–3600	4–2 1/2 x 5 1/8	Y	Own 674989	4	Own 665171	SF	H 5.66–6.66	Own 664452	L4IH	280	442	a	TX	60 1/2	8 1/2 x 2 1/2 x 1/8	T
64	(2 spd. R.axle) M16	.....	128	195	15000	3850	7.00/20D	8.25/20	Own 3M	6–3 1/8 x 4 3/8	226	6.5	176	94–3600	4–2 1/2 x 5 1/8	Y	Own 674989	4	Own 674681	SF	H Dual Rge.	Own 664452	L4IH	280	442	a	TX	60 1/2	8 1/2 x 2 1/2 x 1/8	T
65	Truckstell (C) F18-5	.....	140	194	18500	▲5265	7.50/20°	10.00/20	Ford	8–3 1/8 x 3 1/2	239	6.4	180	100–3800	3–2 1/2 x 4. 71	N	Ford	12	Cla R1300	SF	H 5.67–6.83	Ford	L4IHV	355	610	a	TX	65 1/2	7 1/2 x 3x .47	CT‡
66	(C).....C18-5	.....	144	197	18500	▲5395	7.50/20°	10.00/20	Chevrolet	6–3 1/8 x 3 1/2	235	6.6	192	93–3100	4–2 3/4 x 5 1/8	N	Chev & BL	12	Cla R1300	SF	H 5.67–6.83	Chevrolet	L4IHV	355	610	a	TD	67	7 1/2 x 3x .47	CT‡
67	Ward La Fr....D-1	.....	149	220	25000	9500	10.00/20	10.00/20	Con B6427	6–4 1/8 x 4 7/8	427	6.1	325	127–....	7–2 7/8 x 13 1/2	Y	Fu 5A430	5	Tim 58415PA	B	R ** –6.14	Tim 35011TW	Ws4A	600	928	e	TM	68 1/4	9 1/8 x 3x 1/4	.....
68	.....D-1B	.....	149	220	25000	9500	10.00/20	11.00/20	Con 22R	6–4 1/2 x 5 1/4	501	5.4	384	148–....	7–2 3/4 x 14 1/2	Y	Fu 5A620	5	Tim 58415PA	B	R ** –6.14	Tim 35011TW	Ws4A	600	928	e	TM	68 1/4	9 1/8 x 3x 1/4	.....
69	.....D-1C	.....	149	220	29000	9500	11.00/20	11.00/24	Con B6427	6–4 1/8 x 4 7/8	427	6.1	325	127–....	7–2 7/8 x 13 1/2	Y	Fu 5A430	5	Tim S-200P	S2	R ** –7.84	Tim 35011TW	Ws4A	673	1031	e	TM	68 1/4	9 1/8 x 3x 1/4	.....
70	.....D-2	.....	149	220	29000	12000	11.00/20	11.00/24	Con R6513	6–4 1/2 x 5 3/8	513	5.9	405	180–....	7–3 1/4 x 14 1/2	Y	Fu 5A620	5	Tim S-200P	S2	R ** –7.84	Tim 35011TW	Ws4A	673	1031	e	TM	68 1/4	10x3x 1/8	.....
71	.....D-3	.....	149	220	30000	12000	11.00/22	12.00/24	Con R6572	6–4 3/4 x 5 3/8	572	5.	454	198–....	7–3 1/4 x 14 1/2	Y	Fu 5A650	5	Tim U200P	S2	R ** –7.84	Tim 26458W	Ws4A	750	1159	e	TM	68 1/4	10x3x 1/8	.....
72	(D).....D-5	.....	155	226	35000	12500	11.00/22	12.00/24	Cum HB600	6–4 1/2 x 6	672	17.	500	150–....	7–4 1/2 x 16 3/4	Y	Fu 5A650	5	Tim U200P	S2	R ** –6.42	Tim 26458W	Ws4A	750	1159	e	TM	68 1/4	10x3x 1/8	.....
73	.....FD-0	.....	186	....	.....	12000	11.00/20	11.00/24	Con 22R	6–4 1/2 x 5 1/4	5015	4	384	148–....	7–2 3/4 x 14 1/2	Y	Fu 5A620	5	Tim R3100W	S2	R ** –8.15	Tim F3100W	Ws4A	627	1029	e	TM	99 3/4	9 1/4 x 3x 1/8	.....
74	.....FD-1	.....	186	....	37000	12000	11.00/20	11.00/24	Con R6602	6–4 1/2 x 5 3/8	6026	2	472	206–....	7–3 1/4 x 14 1/2	Y	Fu 5A650	5	Tim R462W	S2	R ** –8.15	Tim F3100W	Ws4A	627	1029	e	TM	99 3/4	10x3x 1/8	.....
75	(D).....FD-2	.....	186	....	37000	12500	11.00/22	11.00/24	Cum HB600	6–4 7/8 x 6	672	17.	500	150–....	7–4 1/2 x 16 3/4	Y	Fu 5A920	5	Tim R462W	S2	R ** –8.15	Tim F3100W	Ws4A	627	1029	e	TM	99 3/4	10x3x 1/8	.....

‡ Equipped with 3 speed auxiliary transmission. ▲ Includes cab △ Includes cab and body. ■ Auxiliary transmission for logging operation ° Rear 8.25/20 ▲▲ Diameter Front 2.343, Center 2.375, Rear 2.406.
Total length–5 750. ▽ Front only; Rear 7.50/17 ♦♦ Includes $8.00 for spare wheel carrier on back of cab. △ Includes cab and body. ♦ Cab and body included.

Line Number	MAKE AND MODEL	Chassis List Price	WHEEL-BASE: Minimum Standard	WHEEL-BASE: Maximum Standard	Gross Vehicle Weight for Normal Service	Chassis Weight (See definition)	TIRE SIZES (D-dual rear S-single rear): Standard Front and Rear	TIRE SIZES: Maximum Authorized Tire Size (Duals unless noted)	ENGINE DETAILS: Make and Model	No. of Cylinders, Bore and Stroke	Displacement	Comp. Ratio	Torque lb. ft.	Max. Brake H.P. at R.P.M. Given	Main Bearings: Number, Diameter and Length	Governor Standard	TRANSMISSION: Make and Model	TRANSMISSION: Forward Sp'ds	REAR AXLE: Make and Model	REAR AXLE: Gear and Type	REAR AXLE: Drive & Torque	REAR AXLE: Gear Ratio, Range in High	FRONT AXLE: Make and Model	BRAKES: SERVICE: Make Location Type Operat'n	BRAKES: SERVICE: Lining Area	BRAKES: SERVICE: Drum Area	BRAKES: SERVICE: Drum Material	BRAKES: Hand Location Type	C-A Dimensions (Min. Std. W. B.)	FRAME: Side Rail Dimensions	FRAME: Type
	Four-Wheel-Drive																															
1	Corbitt.....18FG	.....	Opt	Opt	18000	6600	8.25/20	9.00/20	Con M6330	6–4x4½	330	5.7	240	102–2800	7–2⅝x12	Y	Fu 5A33	5	Tim 56410H	SF	H	** –6.83	Tim F35H	L4IHV	....	578	a	TD	Opt	8x3¼x¼		T
2	.....22FG	.....	159	Opt	22000	.....	9.00/20	10.00/20	Con B6371	6–4⅛x4½	371	5.7	280	100–2500	7–2⅞x13½	Y	Fu 5A43	5	Tim R2090H	2F	H	** –8.43	Tim F2090H	L4IHV	....	868	a	TD	74	9x3x¼		T
3	.....25FG	.....	Opt	Opt	25000	.....	10.00/22	11.00/22	Con R6513	6–4⅞x5⅜	513	5.9	400	165–2600	7–3¼x14½	Y	Fu 5A62	5	Tim R3100W	2F	H	** –8.14	Tim F3100W	Ws4IA	....	1030	a	TD	Opt	10½x3x¼		Tf
4	.....28FG	.....	Opt	Opt	28000	.....	11.00/22	11.00/24	Con R6602	6–4⅞x5⅜	602	6.0	460	185–2600	7–3¼x14½	Y	Fu 5A65	5	Tim R462W	2F	H	** –8.14	Tim F3100W	Ws4IA	....	1030	a	TD	Opt	10½x3x¼		Tf
5	FWD.....HA	.....	144	156	17000	▲7470	8.25/20D	10.00/20	Wau BZ	6–4x4¼	320	5.9	223	95–2800	7–2⅝x10¼	Y	Own H	5	Own H	SF	H	6.6 –9.06	Own H	L4IHV	391	807	a	T4	79½	9x3x¼		T
6	.....HR	.....	144	156	20000	▲8000	9.00/20	10.00/20	Wau MZR	6–3¼x4¾	404	5.7	270	98–2500	7–2⅝x12⅝	Y	Own H	5	Own H	SF	H	6.6 –9.06	Own H	L4IHV	391	807	a	T4	79½	9x3x¼		T
7	.....HG	.....	154	154	20000	▲8050	9.00/20	10.00/20	Wau MZR	6–3¼x4¾	404	5.7	270	98–2500	7–2⅝x12⅝	Y	Own H	5	Own H	SF	H	6.6 –9.06	Own H	L4IHV	391	807	a	T4	89¾	7 ⅄ x3x ⅄		C
8	.....SU	.....	150	150	25000	▲10420	11.00/20D	12.00/20	Wau SRKR	6–4⅜x5⅛	517	5.5	365	126–2400	7–3x13⅞	Y	Own U	5	Own U	BF	H	6.7 –9.8	Own U	L4IHV	496	867	a	T4	90	7 ⅄ x3x ⅄		C
9	.....M7	.....	150	150	38600	▲15400	12.00/20D	12.00/20	Wau 145GK	6–5¼x6	779	6.2	585	186–2000	7–3½x17¾	Y	Own M	10	Tim 1758	2F	H	** –7.53	Wis F409	Ws4IA	578	976	a	T4	90	10 ⅄ x3x ⅄		C
10	(D).....M7	.....	150	150	38600	▲15700	12.00/20D	12.00/20	Cum HB600	6–4⅞x6	672	17.	500	150–1800	7–4½x16¼	Y	Own M	10	Tim 1758	2F	H	** –7.53	Wis F409	Ws4IA	578	976	a	T4	90	10 ⅄ x3x ⅄		C
11	Marmon-MH440-4	6825	158	158	20700	▲8700	9.00/20D	10.00/20	Her WXLC3	6–4¼x4¾	404	5.4	293	118–2800	7–2⅝x8¾	Y	Fu 5A430	5	Tim R2090W	2B	H	** –8.43	Tim F2090W	W....A	584	887	c	F	72	9 ⅄ x3x¼		T
12	Herr...MH555-4	8525	161	161	24000	▲10200	10.00/20D	11.00/20	Her RXC	6–4⅝x5¼	529	6.3	390	131–2200	7–3x9⅜	Y	Fu 5A620	5	Tim R3100W	2B	H	** –8.15	Tim F3100W	W....A	692	1039	c	F	72	10 ⅄ x3x ⅄		T
13	(C).....CMM5-4	866	134	134	13500	▲4847	7.50/20D	7.50/20	Ford	8–3 ⅄ x3¾	239	6.4	176	100–3500	3–2½x4.71	N	Ford	4	Ford	S	H	** –6.67	Own M5	F....H	302	563	a	F	60 ⅄	7x2¾x ⅄		T
14	(C).....CMM6-4	888	158	158	13500	4973	7.50/20D	7.50/20	Ford	8–3 ⅄ x3¾	239	6.4	176	100–3500	3–2½x4.71	N	Ford	4	Ford	S	H	** –6.67	Own M5	F....H	303	563	a	F	84 ⅄	7x2¾x ⅄		T
15	.....DVL-1	.....	90	118	8500	4300	7.50/16S	8.25/18S	Willys MB	4–3⅛x4½	134	6.4	105	60–4000	3–2.33x5.48	N	Own	3	None	.....		7.10	Own	4IH	202	3x7	M2	.....	.....	.....		.....
16	Oshkosh....W-307	.....	149	204	23600	10200	10.00/20	11.00/20	Her WXLC3	6–4¼x4¾	404	6.3	310	118–2500	7–2⅝x13¾	Y	Fu 5A43	5	Tim 58300	SF	H	** –7.8	Own W307	L41I	560	867	G	TX	82	8¼x3x⅜		TF
17	.....W-700	.....	150	204	30000	▲12000	11.00/20	12.00/20S	Her RXCO	6–4⅝x5¼	529	5.4	380	128–2200	7–3x12¾	Y	Fu 5A620	5	Own W700	2F	H	** –6.6	Own W700	L4IH	630	975	G	TX	82	10½x3x⅜		TF
18	.....W-703	.....	150	204	30000	▲12200	11.00/20	12.00/20S	Her RXLD	6–4¾x5¼	558	5.4	405	141–2200	7–3½x13¾	Y	Fu 5A620	5	Own W700	2F	H	** –6.6	Own W700	L4IH	630	975	G	TX	82	10½x3x⅜		TF
19	(D).....W-906	.....	158	190	38000	▲14900	12.00/20	14.00/20S	Cum HB600	6–4⅞x6	672	....	500	150–1800	7–4½x16	Y	Fu 4A86	4	Own W906	2F	H	** –6.2	Own W906	LT4IWS	630	975	G	TX	90	10½x3x⅜		TF
20	Peterbilt(D)270DD	8950	165	Opt	27000	12500	10.00/20D	11.00/22	Cum HB600	6–4⅞x6	672	17.	500	150–1800	7–4½x16½	Y	Spi 7741	12	U-200P	2F	R	** –6.42	Tim 36000W	Ws4IA	800	1250	a	FD	80½	10⅜x3⅛x ⅄		TL
21	Walter(c.f.)....FN	.....	126	150	20000	7500	9.00/20D	10.00/20S	Wau MZR	6–4¼x4¾	404	5.6	290	100–2500	7–2⅝x12½	Y	Own FN	6	Own FNB	2	H	6.0–8.0	Own FN	O4IA	470	670	G	FI	84	7x2¾x¼		C
22	(c.f.)..FZM	.....	126	150	24000	8500	10.00/20D	12.00/20S	Wau MZR	6–4¼x4¾	404	5.6	290	100–2500	7–2⅝x12½	Y	Own FN	6	Own FMB	2	H	6.0–8.0	Own FJ	O4IA	470	670	G	FI	84	12x3½x½		B
23	(c.f.)..FKM	.....	126	150	24000	9000	10.00/20D	12.00/20S	Wau SRKR	6–4⅜x5⅛	517	5.5	365	125–2200	7–3x13⅞	Y	Own FJD	6	Own FMB	2	H	6.0–8.0	Own FJ	O4IA	470	670	G	FI	84	12x3½x½		B
24	(c.f.)..FCK	.....	126	138	30000	10500	10.00/24D	11.00/24S	Wau SRKR	6–4⅜x5⅛	517	5.5	365	125–2200	7–3x13⅞	Y	Own FC	6	Own FCB	2	H	7.5–9.0	Own FC	O4IA	585	890	D	FI	84	13x3¾x½		B
25	(c.f.)...FC	.....	138	162	32000	11000	11.00/24D	12.00/24S	Wau SRKR	6–4⅜x5⅛	517	5.5	365	125–2200	7–3x13⅞	Y	Own FC	6	Own FCB	2	H	7.5–9.0	Own FCR	O4IA	585	890	D	FI	96	14x3¾x½		B
26	(c.f.)...FCR	.....	126	162	42000	12000	12.00/24D	12.00/24	Wau SRKR	6–4⅜x5⅛	517	5.5	365	125–2200	7–3x13⅞	Y	Own FC	6	Own FCR	2	H	7.5–9.0	Own FCR	O4IA	585	890	D	FI	84	14x3¾x½		B
27	(c.f.)...FGB	.....	126	162	32000	12000	11.00/24D	12.00/24S	Wau 145GK	6–5¼x6	779	5.7	580	175–2000	7–3½x17¾	Y	Own FA	6	Own FCB	2	H	7.5–9.0	Own FCR	O4IA	585	890	D	FI	84	14x3¾x½		B
28	(c.f.)...FGR	.....	126	162	42000	13000	12.00/24D	12.00/24	Wau 145GK	6–5¼x6	779	5.7	580	175–2000	7–3½x17¾	Y	Own FA	6	Own FCR	2	H	7.5–9.0	Own FCR	O4IA	585	890	D	FI	89	14x3¾x½		B
29	Willys																															
30	Unv. Jp...CJ-2A	*1090	80	80	2937	†1646	6.00/16	7.00/15	Own CJ-2A	4–3⅛x4½	134	6.4	105	60–4000	3–2.33x5.48	N	WG T90A	3	Spi 41-2	Hy	H	** –5.38	Spi 25	B4H	118	520	a	F	80	4x1¼x ⅄		P
	Six-Wheelers																															
	Wheels Driven																															
31	Autocar ▼																															
32	(D)DC10064.4R	.....	206	206	40000	▲15700	10.00/20	10.00/20	Cum HB600	6–4⅞x6	672	17.	500	150–1800	7–4½x15¾	Y	BL 7741,703A	12	Tim SW3012W	WF	L	** –6.16	Tim z7454	Ws6IA	1102	1569	N	CD	117 ⅄	9x3x¼		LTf
33	(D)DC10064S.4R	.....	144	247	60000	▲18400	11.00/24	11.00/24	Cum HB600	6–4⅞x6	672	17.	500	150–1800	7–4½x15¾	Y	BL 7741,703	12	Tim SD462W	2SF	L	**–10.01	Tim 27454	Ws6IA	998	1519	N	CD	70 ⅄	10½x3x ⅄		LTf
34	Corbitt.....35RG	.....	Opt	Opt	35000	.....	10.00/20	10.00/22	Con B6427	6–4 ⅄ x4⅞	427	6.1	332	127–2600	7–2⅞x13½	Y	Fu 5A43	5	T SBD1500PA	SF	L	** –6.44	Tim 35000TW	Ws6IA	....	1094	a	TX	Opt	10½x3x¼		Tf
35	.....40RG	.....	Opt	Opt	40000	.....	10.00/22	11.00/22	Con R6602	6–4⅛x5⅜	602	6.0	460	185–2600	7–3¼x14½	Y	Fu 5A65	5	T SDD3000PA	2F	L	** –8.44	Tim 35100TW	Ws6IA	....	1567	a	TD	Opt	12¼x3⅛x⅜		Tf
36	.....40SG	.....	Opt	Opt	40000	.....	10.00/20	10.00/22	Con R6513	6–4½x5⅜	513	5.9	400	165–2600	7–3¼x14½	Y	Fu 5A62	10	T SFD154W	2F	L	** –8.43	Tim F2090W	Ws6IA	....	1302	a	TD	Opt	10½x3x¼		Tf
37	.....50SD6	.....	Opt	Opt	50000	.....	10.00/22	11.00/22	Her HXD	6–5½x6	855	...	645	203–2100	7–3½x17	Y	Fu 4A86	8	T SD353W	2F	L	** –7.33	Tim F3100W	Ws6IA	....	1626	a	TD	Opt	10½x3x¼		Tf
38	Diamond T																															
39	.....900SD3000PA	.....	204	204	40000	13750	10.00/22D	10.00/22	Her RXLC	6–4⅝x5¼	529	5.4	365	132–2100	7–3½x13¼	Y	Spi 6241, 703	12	T SD3000PA	2F	R	** –7.50	Tim 36021TW	Ws6IA	1082	....	A	TD	134	10½x3¼x ⅄		T
40	(D)910SW3002PA	.....	206	206	40000	15100	10.00/22D	10.00/22	Cum HB-600	6–4¼x6	672	17.	500	150–1800	7–4½x16¾	Y	Spi 7851, 703	15	T SW3012PA	2F	R	** –6.07	Tim 36021TW	Ws6IA	1082	....	A	TD	124	10½x3 ⅄ x ⅄		T
41	.(D)910SD462W	.....	206	206	50000	16300	11.00/22D	11.00/22	Cum HB600	6–4⅞x6	672	17.	500	150–1800	7–4½x16¾	Y	Spi 7851, 703	15	T SD462W	2F	R	** –8.15	Tim 36021TW	Ws6IA	1014	....	A	TD	124	10½x3 ⅄ x ⅄		T
42	F.W.D.....M6x6	.....	243	276	58000	▲21400	11.00/24D	11.00/24	Her HXE	6–5¾x6	935	5.5	650	198–2000	7–3½x16⅝	Y	Fu 4B86	8	Wis SD462	2F	H	** –8.15	Wis F409	Ws6IA	1080	1680	a	T6	183	10 ⅄ x3x ⅄		P
43	(D).....M6x6	.....	276	276	58000	▲21800	11.00/24D	11.00/24	Cum HB600	6–4¼x6	672	17.	500	150–1800	7–4½x16¼	Y	Fu 4B86	8	Wis SD462	2F	H	** –8.15	Wis F409	Ws6IA	1080	1680	a	T6	216	10 ⅄ x3x ⅄		P
44	International (2)																															
45	(b)....K-6-F.4R	.....	151	194	22000	6750	7.00/20	8.25/20	Own BLD250	6–3 ⅞x4½	251	6.3	200	100–3200	4–2⅜x5 ⅄	N	Own F51	5	Own RF1450	SF	H	6.16–8.66	Own F470	LH4IHV	507	848	c	PX	77	8 ⅄ x ⅄ x ⅄		T
46	(b)....K-8-F.4R	.....	161	215	27000	8470	7.00/20	9.00/20	Own RED401	6–4⅛x5	401	6.3	318	140–2800	7–3¼x10 ⅄	Y	Own F52	5	Own RF1560	SF	H	6.50–7.16	Own F550	LH6IHV	705	944	c	PX	84	9¼x3 ⅄ x ⅄		T
47	(b)....K-11-F.4R	.....	161	215	37000	10925	9.00/20	10.00/20	Own RED450	6–4⅜x5	451	6.3	360	148–2600	7–3¼x10 ⅄	Y	Own F54	5	Own RF1670	SF	H	** –7.16	Own F760	TW6IA	966	....	G	PX	84	10 ⅄ x3 ⅄ x ⅄		T
48	Ken- (D)523.4R	.....	193	241	43000	14600	10.00/20	11.00/22	Cum NHB6	6–5½x6	743	17.	565	200–2100	7–4½x16½	Y	BL 7841	4	Ti SW3012PA	WF	R	** –6.16	Tim 36000	Ws4rIA	924	1248	a	TD	102	9½x3¼x ⅄		C
49	worth(D)524.4R	.....	193	241	54000	15400	10.00/20	11.00/22	Cum NHB6	6–5½x6	743	17.	565	200–2100	7–4½x16½	Y	BL 7841	4	Tim SW452	WF	R	6.0 –7.6	Tim 36000	Ws4rIA	819	1192	a	TD	102	9½x3¼x ⅄		C
50	.....528.4R	.....	186	234	40000	12500	10.00/20	10.00/22	Bud L0525	6–4½x5½	525	5.5	385	135–2200	7–3x11⅛	Y	Fu 5A620	5	Ti SW3012PA	WF	R	** –6.16	Tim 35100	Ws4rIA	924	1248	a	TD	102	9½x3¼x ⅄		C
51	.....532.4R	.....	186	234	35000	12500	10.00/20	10.00/22	Wau 6MZR	6–4¼x4¾	404	5.9	300	112–2500	7–2⅝x12½	Y	Fu 5A430	5	Ti SW3012PA	WF	R	** –6.16	Tim 35100	Ws4rIA	924	1248	a	TD	102	9½x3¼x ⅄		C
52	.....(D)548.4R	.....	193	241	54000	17000	11.00/22	12.00/24	Cum NHB6	6–5½x6	743	17.	565	200–2100	7–4½x16½	Y	BL 7841	4	Tim SD462	DR	R	** –8.15	Tim 36000	Ws4rIA	819	1192	a	TD	109	9½x3¼x ⅄		dbC
53	.....(D)552.4R	.....	255	255	54000	20700	13.00/24	13.00/24	Cum HB6	6–4¾x6	672	17.	500	150–1800	7–4½x16½	Y	BL 7841	4	Tim SD462W	WF	R	** –8.15	Tim F3200W	Ws4rIA	1109	1192	a	TD	168	9½x3¼x ⅄		dbC
54	Marmon-Herr.																															
55	(C)...CMM5T-6	2790	156	....	225000	6673	7.50/20D	7.50/20	Ford	8–3 ⅄ x3¾	239	6.4	176	100–3500	3–2½x4.71	N	Ford	..	Thornton	S	H	** –6.67	Own M5	M	503	....	a	F	82 ⅄	7½x3x¼		C
56	(C)...CMM6T-6	2822	180	....	225000	6710	7.50/20D	7.50/20	Ford	8–3 ⅄ x3¾	239	6.4	176	100–3500	3–2½x4.71	N	Ford	..	Thornton	S	H	** –6.67	Own M5	M	503	....	a	F	106¼	7½x3x¼		C
57	.....MH-555-6	.....	260	260	37000	14900	11.00/20	11.00/20	Her RXC	6–4⅝x5¼	529	6.3	390	131–2200	7–3x9⅜	Y	Fu 5A620	5	Tim SD353	2B	H	** –8.15	Tim F3100W	Ws..A	1092	1608	....	F	84	10 ⅄ x3x ⅄		T
58	Peterbilt(D)344DT	11415	189	Opt	43000	16250	10.00/20D	11.00/22	Cum HB600	6–4⅞x6	672	17.	500	150–1800	7–4½x16½	Y	Spi 7741	12	Tim SW3012W	WF	A	6.00– 8.5	T 36000W	Ws6IA	1212	1734	a	FD	106½	10⅜x3⅛x ⅄		TL
59	(D).....345DT	11870	187	Opt	43000	17300	10.00/20D	11.00/22	Cum HB600	6–4⅞x6	672	17.	500	150–1800	7–4½x16½	Y	Spi 7741	12	Tim SW452W	WF	A	6.00–10.2	T 36000W	Ws6IA	1000	1626	a	FD	106½	10⅜x3⅛x ⅄		TL
60	(D).....354DT	11915	187	Opt	56000	17450	10.00/20D	11.00/22	Cum HB600	6–4⅞x6	672	17.	500	150–1800	7–4½x16½	Y	Spi 7741	12	Tim SW452W	WF	A	6.00–10.2	T 27454W	Ws6IA	1000	1626	a	FD	106½	10⅜x3⅛x ⅄		TL
61	(D).....355DT	12575	187	Opt	56000	17900	10.00/20D	11.00/22	Cum HB600	6–4⅞x6	672	17.	500	150–1800	7–4½x16½	Y	Spi 7741	12	Tim SD462W	2F	A	** –8.15	T 27454W	Ws6IA	1000	1626	a	FD	106½	10⅜x3⅛x ⅄		TL
62	Sterling																															
63	(D)HWS160H.....	.....	185	245	42000	14500	10.00/20D	10.00/22	Cum HB600	6–4⅞x6	672	17.	500	150–1800	7–4½x16½	Y	Spi 7741§	12	T SW3002PA	WF	L	** –6.16	T 26450W	Ws6IA	1160	1878	a	TX	97	9x3¼x¼		A
64	(D)RWS160H.....	.....	219	232	42000	14500	10.00/20D	10.00/22	Cum HB600	6–4⅞x6	672	17.	500	150–1800	7–4½x16½	Y	Spi 7741§	12	T SW3002PA	WF	L	** –6.16	T 26450W	Ws6IA	1160	1878	a	TX	131	9x3¼x¼		A
65	(D)HDS160H.....	.....	197	232	42000	15000	10.00/20D	10.00/22	Cum HB600	6–4⅞x6	672	17.	500	150–1800	7–4½x16½	Y	Spi 7741§	12	T SD353W	2F	L	** –7.33	T 26450W	Ws6IA	1092	1818	a	TX	109	9x3¼x¼		A
66	(D)HWS160HS.....	.....	211	232	42000	15100	10.00/20D	11.00/22	Cum HB600	6–4⅞x6	672	17.	500	150–1800	7–4½x16½	Y	Spi 7741§	12	T SW452W	WF	L	** –6.00	T 26450W	Ws6IA	1092	1818	a	TX	123	9x3¼x¼		A

§ Equipped with 3 speed auxiliary transmission. ▲ Includes cab. † With Power Take-off. * Vehicle Price.

Line Number	MAKE AND MODEL	Chassis List Price	WHEEL-BASE: Minimum Standard	WHEEL-BASE: Maximum Standard	Gross Vehicle Weight for Normal Service	Chassis Weight (See definition)	TIRE SIZES: D-dual rear S-single rear: Standard Front and Rear	TIRE SIZES: D-dual rear S-single rear: Maximum Authorized Tire Size (Duals unless noted)	ENGINE DETAILS: Make and Model	No. of Cylinders, Bore and Stroke	Displacement	Comp. Ratio	Torque lb. ft.	Max. Brake H.P. at R.P.M. Given	Main Bearings: Number, Diameter and Length	Governor Standard	TRANSMISSION: Make and Model	TRANSMISSION: Forward Sp'ds	REAR AXLE: Make and Model	REAR AXLE: Gear and Type	REAR AXLE: Drive & Torque	REAR AXLE: Gear Ratio Range lo High	FRONT AXLE: Make and Model	BRAKES: SERVICE: Make Location Type Operat'n	BRAKES: SERVICE: Lining Area	BRAKES: SERVICE: Drum Area	BRAKES: SERVICE: Drum Material	BRAKES: Hand Location Type	C-A Dimension (Min. Std. W. B.)	FRAME: Side Rail Dimensions	FRAME: Type
1	HCS195		191	207	46000	14000	10.00/20D	11.00/22	Wau 140GK	6-4½x5½	525	6.1	403	137–2250	7–3x16H	YFu 5A62§	15	Own 195W	4	** –7.31	T 26450W	W861A	1160	1978a	TX	105	9¼x3½x¼	CT†
2	(D)HCS195H		197	211	48000	15000	10.00/20D	11.00/22	Cum HB600	6-4½x6	672	17.0	500	150–1800	7–4½x16½	YSpl 7741§	12	Own 195W	4	** –7.31	T 26450W	W861A	1160	1978a	TX	109	9¼x3½x¼	CT†
3	(D)HWS235H		195	191	60000	18500	11.00/24D	12.00/24	Cum HB600	6-4½x6	672	17.0	500	150–1800	7–4½x16½	YSpl 7741§	12	T SW452W	4	** –6.80	T 27454W	W861A	1092	1810a	TX	107	9¼x3½x¼	CT†
4	(D)HCS265H		195	191	65000	19500	11.00/24D	12.00/24	Cum HB600	6-4½x6	672	17.0	500	150–1800	7–4½x16½	YFu 4B86§	12	Own 265W	CD	R 10.70–15.0	T 27454W	W861A	1160	2091a	TX	90	9¼x3½x¼	CT†
5	(D)HCS297H		178	195	70000	20500	12.00/24D	13.00/24	Cum HB600	6-4½x6	672	17.0	500	150–1800	7–4½x16½	YFu 4B86§	12	Own 330W	CD	R 10.70–15.0	T 27454W	W861A	1260	2046a	TX	90	9¼x3½x¼	CT†
6	Truckstell			156	26000	5900	7.50/20	8.25/20	Ford	8–3⅞x3¾	239	6.4	180	100–3800	2–2¼x4.71	N Ford	4	Eat 1350	SF	** –6.67	Ford	F61HV	502	836e	TX	82½	7½x3x.47	CT†
7	(C)...F2X26 2F			156	25000	6450	7.50/20	8.25/20	Ford	8–3⅞x3¾	239	6.4	180	100–3800	2–2¼x4.71	N Ford	8	Std BL	SFd	5.83–8.11	Ford	F61HV	502	836e	TX	82½	7½x3x.47	CT†
8	(C)...F2X27 2F			156	237	8235	8.25/20	10.00/20	Ford	8–3⅞x3¾	239	6.4	180	100–3800	2–2¼x4.71	N Ford	12	Cla R1300	SF	5.67–6.83	Ford	F61HV	605	1043a	TX	82½	7½x3x.47	CT†
9	(C)...F2X34 2F			156	237	8235	8.25/20	10.00/20	Ford	8–3⅞x3¾	239	6.4	180	100–3800	2–2¼x4.71	N Ford	8	Ford	SF	6.07–10.5	Ford	F61HV	502	836e	TX	63¼	7½x3x.47	CT†
10	(C)...F4X26 4R			144	210	6300	7.50/20	8.25/20	Ford	8–3⅞x3¾	239	6.4	180	100–3800	2–2¼x4.71	N Ford	16	Eat 1350	SFd	7.47–12.9	Ford	F61HV	502	836e	TX	63¼	7½x3x.47	CT†
11	(C)...F4X29 4R			144	210	7000	7.50/20	8.25/20	Ford	8–3⅞x3¾	235	6.1	192	93–3100	2–2¼x5½	N Chevrolet	4	Chevrolet	SF	** –6.17	Chevrolet	C61HV	546	780a	ZI	82¾	7½x3x.47	CT†
12	(C)...C2X26 2F			157	234	5800	7.50/20	8.25/20	Chevrolet	6–3⅞x3¾	235	6.1	192	93–3100	2–2¼x5½	N Chevrolet	8	Tim	SFd	5.64–8.22	Chevrolet	C61HV	546	780a	ZI	82¾	7½x3x.47	CT†
13	(C)...C2X29 2F			157	234	6500	7.50/20	10.00/20	Chevrolet	6–3⅞x3¾	235	6.1	192	93–3100	2–2¼x5½	N C and BL	12	Cla R1300	SF	5.67–6.83	Chevrolet	C61HV	615	1043a	TD	82¾	7½x3x.47	CT†
14	(C)...C4X26 4R			145	212	6150	7.50/20	8.25/20	Chevrolet	6–3⅞x3¾	235	6.1	192	93–3100	2–2¼x5½	N Chevrolet	8	Chevrolet	SF	6.41–11.1	Chevrolet	C61HV	546	780a	ZI	63¼	7½x3x.47	CT†
15	(C)...C4X29 4R			145	212	6850	7.50/20	8.25/20	Chevrolet	6–3⅞x3¾	235	6.1	192	93–3100	2–2¼x5½	N Chevrolet	16	Eat 1350	SFd	7.47–12.9	Chevrolet	C61HV	512	836a	TD	63	7½x3x.47	CT†
16	(C)...C4X29 4R			145	212	6850	7.50/20	8.25/20	Chevrolet	6–3⅞x3¾	235	6.1	192	93–3100	2–2¼x5½	N Chevrolet	16	Eat 1350	SFd	7.47–12.9	Chevrolet	C61HV	512	836a	TD	63	7½x3x.47	CT†

◄ Includes cab. § Equipped with 3 speed auxiliary transmission.

Uniform Standards Proposed for Motor Vehicles

American Association of State Highway Officials submits revised recommendations relating to width, height, length, speed and permissible loads for national adoption

Uniform standards governing the maximum dimensions, weights and speeds of motor vehicles, proposed by the Highway Transport Committee of the American Association of State Highway Officials, have been adopted by a letter ballot of the member State highway departments, with a recommendation that they be incorporated in the motor vehicle laws of all States.

The Association recommends that the standards be considered for adoption by all States in order to promote efficiency in the interstate operation of motor vehicles, increase the safety of highway transportation and establish a basis for regulation of the many relationships between the dimensions and weights of motor vehicles and the strengths and capacities of existing highways.

The standards, based upon years of research by State highway departments and the Public Roads Administration, are advocated in lieu of recommendations previously made by the American Association of State Highway Officials on November 17, 1932, and of modified recommendations applicable during the war emergency period, which were adopted May 27, 1942.

The recommendations, as finally adopted, are as follows:

1. Width: No vehicle, unladen or with load, shall have a total outside width in excess of 96 in. (Note: It is recognized that certain conditions inherent in the design of vehicles suggest the desirability of 102 in. as a standard of maximum width, but the existence of numerous bridges and a large mileage of highways too narrow for the safe accommodation of vehicles of such width precludes the present adoption of the higher standard of width. The State highway departments and the Public Roads Administration are urged to give serious consideration to the desirability of eventual provision for the accommodation of vehicles 102 in. in width in planning the reconstruction of Federal-aid and State highways.)

2. Height: No vehicle, unladen or with load, shall exceed a height of 12 ft., 6 in.

3. Length: (a) No single truck, unladen or with load, shall have an overall length, inclusive of front and rear bumpers, in excess of 35 ft.

(b) No single bus, unladen or with load, shall have an overall length, inclusive of front and rear bumpers, in excess of 40 ft., provided that a bus in excess of 35 ft. in overall length shall have not less than 3 axles.

(c) No combination of truck-tractor and semi-trailer, unladen or with load, shall have an overall length, inclusive of front and rear bumpers, in excess of 50 ft.

(d) No other combination of vehicles shall consist of more than two units, and no such combination of vehicles, unladen or with load, shall have an overall length, inclusive of front and rear bumpers, in excess of 60 ft.

4. Speed: (a) Minimum speed. No motor vehicle shall be unnecessarily driven at such slow speed as to impede or block the normal and reasonable movement of traffic. Exception to this requirement shall be recognized when reduced speed is necessary for safe operation or when a vehicle or combination of vehicles is necessarily or in compliance with law or police direction proceeding at reduced speed.

(b) Maximum speed. No truck shall be operated at a speed greater than 45 mph. Passenger vehicles may be operated at such speeds as shall be consistent at all times with safety and the proper use of roads.

(c) Vehicles equipped with solid rubber or cushion tires shall be operated at a speed not in excess of 10 mph.

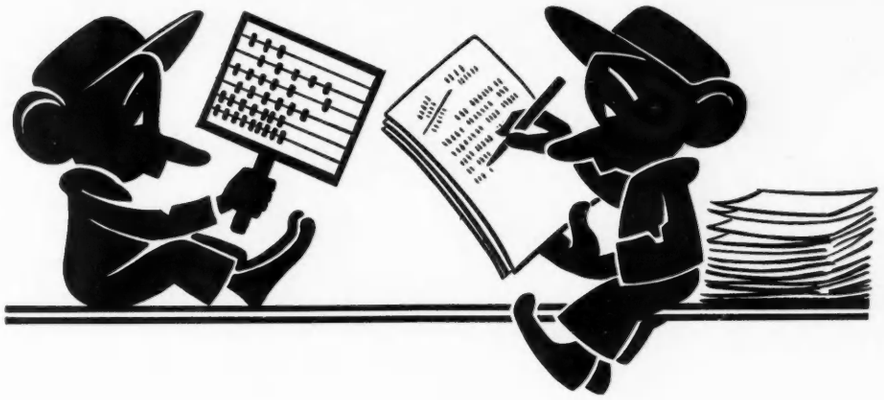
5. Permissible Loads: (a) No axle shall carry a load in excess of 18,000 lb. (Note: An axle load shall be defined as the total load transmitted to the road by all wheels whose centers may be included between two parallel transverse vertical planes 40 in. apart, extending across the full width of the vehicle.)

(b) No group of axles shall carry a load in pounds in excess of the value given in the following table corresponding to the distance in feet between the extreme axles of the group, measured longitudinally to the nearest foot:

Distance in feet between the extremes of any group of axles	Maximum load in pounds carried on any group of axles	Distance in feet between the extremes of any group of axles	Maximum load in pounds carried on any group of axles
4	32,000	31	53,490
5	32,000	32	54,330
6	32,000	33	55,160
7	32,000	34	55,980
8	32,610	35	56,800
9	33,580	36	57,610
10	34,550	37	58,420
11	35,510	38	59,220
12	36,470	39	60,010
13	37,420	40	60,800
14	38,360	41	61,580
15	39,300	42	62,360
16	40,230	43	63,130
17	41,160	44	63,890
18	42,080	45	64,650
19	42,990	46	65,400
20	43,900	47	66,150
21	44,800	48	66,890
22	45,700	49	67,620
23	46,590	50	68,350
24	47,470	51	69,070
25	48,350	52	69,790
26	49,220	53	70,500
27	50,090	54	71,200
28	50,950	55	71,900
29	51,800	56	72,590
30	52,650	57	73,280

(c) The maximum axle and axle-group loads recommended above are subject to reasonable reduction in the discretion of the appropriate highway authorities during periods when road subgrades have been weakened by water saturation or other cause.

(d) The operation of vehicles or combinations of vehicles having dimensions or weights in excess of the maximum limits herein recommended shall be permitted only if authorized by special certificate issued by an appropriate State authority.



STATISTICAL STUDY OF TRUCK TRANSPORTATION

Introduction . . .

In the pages that follow will be found statistical data dealing with truck transportation which have become available for the first time in motor truck history. The statistics are based on material collected and compiled by the Office of Defense Transportation as the result of its Certificate of War Necessity program. In order to become eligible for gasoline rations, every motor truck owner had to apply for a certificate. This certificate application demanded considerable detailed information from the operator, and it is this information that forms the basis for the statistics presented in this section.

Here for the first time are statistics showing the number of trucks, truck-tractors and trailers operated by vocational groups, and the number of vehicles used to transport a vast array of commodities. The figures are broken down by local and over-the-road operations, by single and fleet operations, by private and for-hire operations.

Here will be found tabulations revealing the age and rated capacity of trucks by vocational groups, average annual mileages certified, and computation of average miles per gallon.

Because of the wide differences in the economic nature of various sections of the U. S., the vocational uses of trucks vary with regions, and these variations are tabulated by vocational groups, and by the rated capacity and year model of the trucks they operate.

The tabulations define "single" and "fleet" operations clearly but it is deserving of emphasis that "single" means "operations with one and two power units" and "fleet" means "operations with three or more power units."

The ODT statistics were compiled by J. O. Riley, chief of the Inventory and Statistics Section, who prepared the summaries used in this statistical study. Most of the tabulations are up to date as of Aug. 31, 1944. While the statistics deal with wartime truck operations, they may be considered representative of truck transportation conditions existing at present.

Index . . .

VOCATIONAL DATA

Vocational Classification Code . . . 84
Vocational Usage of Trucks & Truck-Tractors by Rated Capacity . . . 85
Vocational Usage of Trucks & Truck-Tractors by Year Model . . . 85
Vocational Usage of Trucks & Truck-Tractors by Commodities Hauled . 87
Vocational Usage of Trailers by Commodities Hauled . . . 87
Vocational Usage of Trucks & Truck-Tractors in Local & Over-the-Road Service . . . 87
Vocational Usage of Trailers in Local & Over-the-Road Service . . . 87
Vocational Usage of Trucks & Truck-Tractors by Fleets & Non-Fleets . . 87
Vocational Usage of Trailers by Fleets & Non-Fleets . . . 87
Vocational Usage of Trucks & Truck-Tractors by Regions . . . 92

REGIONAL DATA

Boundary Map of ODT Regions . . . 91
Regional Distribution of Trucks & Truck-Tractors by Year Model . . . 91
Regional Distribution of Trucks & Truck-Tractors by Vocational Groups 92
Regional Distribution of Buses & Taxicabs by Vocational Groups . . . 93
Regional Distribution of Trucks & Truck-Tractors by Rated Capacity . 93

MILEAGE DATA

Mileage, Annual Total Certified by Vocational Groups . . . 84
Mileage, Annual Average per Power Unit by Vocational Groups . . . 84
Mileage, Annual Average per Gallon by Vocational Groups . . . 84
Mileage, Annual Average per Power Unit by Fleet & Non-Fleet Operators . . . 86
Mileage, Annual Average per Power Unit in Local & Over-the-Road Service . . . 86

AGE DATA

Year Model of Trucks & Truck-Tractors by Rated Capacity . . . 86
Year Model of Trucks & Truck-Tractors by Regions . . . 91

CAPACITY DATA

Rated Capacities of Trucks & Truck-Tractors by Year Model . . . 86
Rated Capacities of Trucks & Truck-Tractors by Regions . . . 93

FUEL DATA

Average Miles per Gallon Certified by Vocational Groups . . . 84
Total Annual Gallonage Certified by Vocational Groups . . . 84
Average Annual Gallons Certified by Vocational Groups . . . 84

FLEET DATA

Average Annual Miles per Power Unit in Local & Over-the-Road Service 86
Average Annual Miles per Power Unit by Vocational Groups . . . 86
Trucks & Truck-Tractors Operated by Vocational Groups . . . 87, 90
Trailers Operated by Vocational Groups . . . 87, 90
Trucks & Truck-Tractors in Use by Commodities Hauled . . . 87
Trailers in Use by Commodities Hauled . . . 87
Trucks & Truck-Tractors in Use by Vocational Groups by Type of Service 90
Fleet & Non-Fleet Use of Trucks, Truck-Tractors & Trailers . . . 90

PRODUCTION & REGISTRATION DATA

Truck Production by Years and by Capacities . . . 92, 93, 96
Truck Registrations by Years, States & Makes . . . 94, 96

VOCATIONAL CLASSIFICATION CODE USED BY ODT

GOVERNMENTAL AGENCIES

This group includes all agencies of government—Federal, State, district, county, municipal, and local, engaged in the performance of governmental functions, such as policing, fire fighting and highway construction. Excluded are vehicles used by government owned public utilities or government owned institutions performing substantially the same service as privately owned utilities or institutions.

AGRICULTURE

In this group will be included the applications of persons, firms or corporations engaged in farming, dairying, animal husbandry, fishery and forestry, not including, however, any logging or timber operations.

EXTRACTIVE INDUSTRIES

All industries engaged in extracting raw materials from the earth, including mining, quarrying, drilling, oil and gas production, and logging; such as coal mining, products of other metallic and non-metallic ores and concentrates, crude petroleum, natural gas, sand, stone and gravel, etc.

CONSTRUCTION INDUSTRIES

All industries engaged in erecting buildings or structures, building highways or other public or semi-public works, in maintaining or repairing buildings or structures or equipment, implements, vehicles, etc. Included within this group are contractors of all sorts, plumbing, heating, electrical, painting, paving, roofing, wrecking, decorating, bridge building, dredging, etc., automobile repair and garages, and railroad contractors.

PROCESSING INDUSTRIES

Include manufacturing establishments of every sort and kind (whether by manual, mechanical or chemical means or process), including food, tobacco, textiles, apparel, lumber, furniture, paper, printing, publishing, chemicals, paints, rayon, petroleum, rubber, leather, stone, clay, glass products; iron, steel, and other metal articles; machinery equipment, scientific instruments, etc.

WHOLESALE DISTRIBUTION

Include all industries engaged in distributing goods, or laundry, cleaning, dyeing or tailoring service at wholesale, or acting as intermediaries between retailers and producers or wholesalers.

CONSUMER DISTRIBUTION

All industries including retailer engaged in the resale of articles or merchandise or laundry, cleaning, dyeing or tailoring service at retail to consumers of every kind.

PUBLIC UTILITIES

Whether governmentally or privately owned, including motor carriers, common and contract, railroads, airlines, express companies, forwarders, street railways, taxicabs, water carriers, warehousing, storage companies, pipe lines, etc., communication companies, telephone, telegraph,

TRUCKS, TRUCK-TRACTORS, TRAILERS, BUSES, ANNUAL MILEAGE AND MOTOR FUEL CERTIFIED, BY VOCATIONAL GROUPS

(As of Aug. 31, 1944)

Vocational Group	Equipment				Annual Mileage Certified			Annual Motor Fuel Certification		Average Miles Per Gallon
	Power Units		Trailers and Semitrailers							
	Number	% Total	Number	% Total	Total (Add 000)	% Total	Average Per Power Unit	Gallons (Add 000)	% Total	
A. Property Carrier Group										
Private (other than for-hire)										
Governmental Agencies	233,935	4.91	8,214	3.76	1,959,659	4.02	8,373	272,912	4.68	7.2
Agriculture	1,651,220	34.63	9,536	4.37	11,638,753	23.91	7,049	1,105,814	18.95	10.5
Extractive Industries	94,382	1.99	10,616	4.85	11,349,169	2.77	14,284	185,625	3.18	7.3
Construction Industries	436,315	9.15	8,207	3.74	3,596,228	7.40	8,242	399,127	6.87	9.2
Manufacturing Industries	190,338	3.99	20,843	9.55	2 535 074	5.21	13,319	329,599	5.63	7.7
Wholesale Distribution	367,143	7.69	15,411	7.06	4 430,349	9.21	12,203	524 390	8.99	8.5
Consumer Distribution	678,085	14.22	10,822	4.96	5,891,053	12.11	8,688	649,765	11.14	9.1
Other Public Utilities	88,695	1.86	12,039	5.52	788,286	1.62	8,888	76,326	1.30	10.3
Business, Professional & Personal Services	130,523	2.73	4,128	1.90	1,016,823	2.09	7,790	109,545	1.88	9.4
Institutional Agencies	21,101	.43	359	.17	145,553	.29	6,898	15,303	.26	9.5
Personal Transportation	152,286	3.20	141	.06	915,182	1.87	6,010	79,611	1.37	11.5
Tank Trucks (All Private Uses)[1]	90,907	1.92	7,495	3.43	1,399,326	2.88	15,393	211,594	3.63	6.6
Not Elsewhere Classified	1,998	.04	14	.01	4,662	.01	2,333	408	.01	11.4
Total Private	4,136,928	86.75	107,829	49.39	35,718,066	73.39	8,634	3,948,019	67.67	9.0
For-Hire: Intercity Common Carriers	151,963	3.19	65,537	30.04	4,757,998	9.78	31,310	765,288	13.12	6.2
Local Common Carriers	118,434	2.43	11,056	5.07	1,193,418	2.45	10,077	169,477	2.91	7.0
All Contract Carriers	347,177	7.28	26,407	12.10	6,251,576	12.86	18,007	817,922	14.02	7.6
Tank Trucks (All For-Hire Uses)[1]	14,934	.30	7,440	3.41	733,980	1.51	49,143	132,788	2.28	5.5
Total For-Hire	632,508	13.25	110 440	50.62	12,936,972	26.61	20,453	1,885,475	32.33	6.9
TOTAL—Property Carrier Group	4,769 436	100.00	218,269	100.00	48,655,038	100.00	10,201	5,833,494	100.00	8.3
B. Passenger Carrier Group										
Ambulances and Hearses[2]	49,313	15.46	20	1.67	353,035	4.53	7,159	35,473	3.20	10.0
School Buses[3]	84,784	26.59	10	.83	743,220	9.55	8,766	99,149	8.96	7.5
Taxicabs[4]	78,717	24.68	1	.09	2,878,204	36.99	36,564	262,874	23.73	10.9
Rental Cars and Trucks[5]	25,015	7.84	780	65.22	295,037	3.79	11,794	37,850	3.42	7.8
Local and Suburban Buses[6 8]	59,363	18.61	220	18.40	2,160,757	27.78	36,399	443,394	40.05	4.9
Intercity Buses[7]	21,753	6.82	165	13.80	1,350,635	17.36	62,090	228,505	20.64	5.9
TOTAL	318,945	100.00	1,196	100.00	7,780,888	100.00	24,396	1,107,245	100.00	7.0
Property Carrier Group	4,769,436	93.73	218,269	99.46	48,655,033	86.21	10,201	5,833,494	84.05	8.3
Passenger Carrier Group	318,945	6.27	1,196	.54	7,780,888	13.79	24,396	1,107,245	15.95	7.0
GRAND TOTAL	5,088,381	100.00	219 465	100.00	56 435,926	100.00	11,091	6,940,739	100.00	8.1

[1] Distribution of material shown on tank trucks between private and for-hire is based on data as of about the end of 1943.
[2] Includes 1,000 service trucks for which other information is not separable.
[3] Includes 1,945 service trucks for which other information is not separable.
[4] Includes 16 service trucks for which other information is not separable.
[5] Includes 16,966 rental trucks for which other information is not separable.
[6] Includes 1,237 service trucks for which other information is not separable.
[7] Includes 183 service trucks for which other information is not separable.
[8] Miles per gallon is less than the amount shown because of the fact that mileage is certified to 2,590 trolley coaches for which no fuel is included.

and radio, electric light and power, gas, steam, water and sanitary plants.

BUSINESS, PROFESSIONAL AND PERSONAL SERVICES

Including finance companies, banks, insurance, real estate, advertising, domestic service, hotels, lodging places, motion pictures, and other amusements, medical, education, religious, legal, engineering, etc.

INSTITUTIONAL AGENCIES

Whether governmentally or privately owned, such as hospitals, sanitariums, asylums, homes, schools, colleges, camps, charitable and non-profit associations and companies.

PERSONAL TRANSPORTATION

The bulk of these vehicles are light pick-up trucks which are predominantly used for personal transportation; however, some larger trucks are included which are used in services generally similar to those in which buses are used. Because of the fact that the use of the majority of these vehicles does not differ greatly from the use of many general service vehicles in the farm field, they have been included with the property carrier group. Further, in most instances their predominant use for passenger carrying was of a temporary nature.

TRUCKS & TRUCK-TRACTORS BY VOCATIONAL GROUP & RATED CAPACITY

(As of Aug. 31, 1944)

Vocational Group	Less than 1½ Tons	1½ Tons	Over 1½ Tons but not including 3½ Tons	3½ Tons to but not including 5 Tons	5 Tons and over	Not Specified	Totals
A. Property Carrier Group							
Governmental Agencies	66,045	93,819	31,983	7,641	13,144	21,303	233,935
Agriculture	1,079,483	527,442	26,923	2,122	1,661	13,589	1,651,220
Extractive Industries	29,016	46,954	10,028	2,434	4,056	1,894	94,382
Construction Industries	280,219	113,891	22,613	4,269	6,902	8,421	438,315
Processing Industries	56,642	97,845	21,473	4,092	5,680	4,606	190,338
Wholesale Distribution	166,668	143,767	34,219	4,668	6,303	6,518	367,143
Consumer Distribution	418,743	199,827	35,157	4,739	6,953	12,666	678,085
Public Utilities—For-Hire:							
Intercity Common Carriers	13,062	80,491	37,966	7,450	9,535	3,459	151,963
Local Common Carriers	24,431	59,287	20,154	4,856	5,954	3,752	118,434
Contract Carriers	67,124	222,669	34,527	6,349	9,968	6,540	347,177
Other Public Utilities	61,389	17,506	7,131	839	1,106	724	88,695
Tank Trucks (All Uses)	8,030	59,526	16,473	6,116	7,753	7,943	105,841
Business, Professional and Personal Services	67,831	43,701	8,209	1,571	1,762	2,449	130,523
Institutional Agencies	10,469	8,294	1,200	116	104	918	21,101
Personal Transportation	134,996	13,620	680	43	43	2,904	152,286
Not Elsewhere Classified	1,372	565	42	.....	3	16	1,998
TOTAL—Property Carrier Group	2,485,520	1,739,204	308,778	57,305	80,927	97,702	4,769,436
Passenger Carrier Group							
Ambulances and Hearses	683	90	3	1	1	222	1,000
School Buses	1,228	494	8	5	.....	210	1,945
Rental, Cars and Trucks	4,619	6,677	3,107	1,007	1,064	492	16,966
Taxicabs	11	2	.....	.....	.....	3	16
City and Suburban Buses	367	452	148	49	153	68	1,237
Intercity Buses	106	39	20	2	1	15	183
TOTAL—Passenger Carrier Group	7,014	7,754	3,286	1,064	1,219	1,010	21,347
TOTALS—All Property-Carrying Power Units	2,492,534	1,746,958	312,064	58,369	82,146	98,712	4,790,783

TRUCKS & TRUCK-TRACTORS BY VOCATIONAL GROUP & YEAR MODEL

(As of Aug. 31, 1944)

VOCATIONAL GROUP	1944 1943 1942	1941	1940	1939	1938	1937	1936	1935	1934	1933	1932	1931 and Older	Not Known	Total
A. Property Carrier Group														
Government Agencies	13,050	29,321	29,516	25,701	21,175	22,425	19,951	12,634	8,065	3,954	5,730	34,194	8,219	233,935
Agriculture	41,685	144,781	132,941	119,795	104,729	189,754	190,008	131,923	98,679	49,769	40,618	338,829	17,709	1,651,220
Extractive Industries	10,637	17,696	12,852	9,055	6,044	9,377	7,939	4,713	3,243	1,413	1,230	9,139	2,044	94,382
Construction Industries	20,079	52,420	43,577	37,994	29,169	53,004	52,477	31,769	23,061	11,228	9,424	65,207	6,906	438,315
Processing Industries	23,536	38,917	27,793	19,965	11,956	17,921	14,893	8,761	6,259	2,937	2,108	11,833	3,459	190,338
Wholesale Distribution	20,581	83,402	63,389	46,165	31,102	39,299	29,740	16,357	10,836	5,306	3,203	13,288	4,475	367,143
Consumer Distribution	22,650	115,042	97,236	74,031	51,581	80,240	72,024	41,567	28,868	13,486	11,472	59,805	10,103	678,085
Public Utilities For-Hire:														
Intercity Common Carriers	14,213	33,648	25,063	18,530	10,381	14,043	12,280	7,164	4,513	1,955	1,437	6,843	1,843	151,963
Local Common Carriers	3,364	14,318	11,623	9,826	8,633	12,901	14,133	8,921	6,917	3,469	3,208	18,920	2,201	118,434
Contract Carriers	24,041	56,911	46,783	36,624	23,630	39,459	36,842	21,110	14,840	6,527	5,171	29,954	5,275	347,177
Other Public Utilities	4,598	19,148	13,927	10,191	7,530	12,393	8,735	4,087	2,003	820	768	3,741	754	88,695
Tank Trucks (All Uses)	9,491	19,135	15,817	11,869	8,292	11,033	9,307	6,180	4,688	2,024	1,395	4,755	1,855	105,841
Business, Professional & Personal Services	3,541	12,910	11,200	9,485	7,942	14,761	15,536	10,877	8,550	4,572	3,793	25,333	1,973	130,523
Institutional Agencies	1,508	2,938	2,522	2,283	1,828	2,267	1,925	1,352	954	444	435	2,245	400	21,101
Personal Transportation	2,065	10,360	10,042	9,927	8,861	18,293	19,703	12,748	9,280	4,959	4,040	40,156	1,854	152,286
Not Elsewhere Classified	75	144	131	114	82	210	266	168	118	53	55	562	20	1,998
TOTAL—Property Carrier Group	215,114	651,091	544,412	441,555	332,935	537,380	505,759	320,329	230,874	112,896	94,137	713,864	69,090	4,769,436
B. Passenger Carrier Group*														
Ambulances and Hearses	58	184	167	114	115	115	86	53	28	10	9	22	39	1,000
School Buses	38	147	221	225	185	290	235	136	133	61	52	193	29	1,945
Rental Cars and Trucks	615	4,804	3,751	2,569	1,582	1,371	790	343	220	125	55	259	477	16,966
City and Suburban Buses	79	147	123	95	76	140	103	66	42	25	24	296	21	1,237
Intercity Buses	11	52	21	18	7	15	11	7	5	1	3	23	9	183
TOTAL—Passenger Carrier Group*	802	5,336	4,283	3,023	1,965	1,937	1,226	611	429	222	143	793	577	21,347
TOTALS—All Property Carrying Power Units	215,916	656,427	548,695	444,578	334,900	539,317	506,985	320,940	231,303	113,118	94,280	714,657	69,667	4,790,783

* Reminder: Only trucks and tractors in use by passenger carrier groups are tabulated here.

TRUCKS & TRUCK-TRACTORS BY RATED CAPACITY & YEAR MODEL†

(As of August 31, 1944)

Year Model	Less than 1½ Tons			1½ Tons			Over 1½ but less than 3½ Tons			3½ but less than 5 Tons		
	Number	% of Total of This Capacity	% of Total of This Year Model	Number	% of Total of This Capacity	% of Total of This Year Model	Number	% of Total of This Capacity	% of Total of This Year Model	Number	% of Total of This Capacity	% of Total of This Year Model
1942 and later	76,147	3.06	35.27	106,604	6.10	49.37	19,670	6.30	9.11	3,774	6.46	1.75
1941	341,333	13.69	52.00	237,453	13.59	36.17	47,676	15.26	7.26	9,118	15.62	1.39
1940	288,840	11.59	52.64	199,202	11.35	36.12	37,213	11.93	6.78	7,466	12.79	1.36
1939	234,486	9.41	52.74	160,419	9.18	36.08	31,077	9.96	6.99	5,409	9.27	1.22
1938	182,284	7.31	54.43	114,723	6.57	34.26	23,437	7.53	7.01	3,885	6.62	1.16
1937	294,815	11.83	54.66	192,026	10.99	35.60	32,362	10.37	6.00	5,368	9.20	1.00
1936	263,281	10.56	51.93	195,454	11.19	38.55	30,181	9.67	5.96	4,670	8.00	.92
1935	155,495	6.24	43.45	136,471	7.81	42.52	17,598	5.64	5.48	3,173	5.44	.99
1934	102,847	4.13	44.47	105,756	6.05	45.72	13 792	4.42	5.96	2,572	4.41	1.11
1933	49,685	1.99	43.92	50,185	2.87	44.37	7,899	2.53	6.98	1,516	2.60	1.34
1932	44,843	1.80	47.57	33,789	2.11	39.02	6,967	2.23	7.39	1,273	2.18	1.35
1931 and earlier	434,227	17.42	60.76	197,926	11.33	27.70	39,334	12.60	5.50	9,079	15.55	1.27
Not Specified	24,276	.97	34.84	14,950	.86	21.46	4,803	1.54	6.90	1,086	1.86	1.56
TOTAL	2,492,534	100.00	52.03	1,746,958	100.00	36.47	312,064	100.00	6.51	58,369	100.00	1.22

Year Model	5 Tons and Over			Not Specified			TOTAL		
	Number	% of Total of This Capacity	% of Total of This Year Model	Number	% of Total of This Capacity	% of Total of This Year Model	Number	% of Total of This Capacity	% of Total of This Year Model
1942 and later	5,734	6.98	2.65	3,987	4.04	1.85	215,916	4.51	100.00
1941	11,185	13.62	1.71	9,662	9.79	1.47	656,427	13.70	100.00
1940	8,933	10.87	1.63	8,041	8.15	1.47	548,695	11.45	100.00
1939	6,885	8.38	1.55	6,322	6.41	1.42	444,578	9.23	100.00
1938	5,504	6.70	1.64	5,037	5.10	1.50	334,900	6.99	100.00
1937	7,599	9.25	1.41	7,147	7.24	1.33	539,317	11.26	100.00
1936	6,595	8.03	1.30	6,804	6.89	1.34	506,985	10.58	100.00
1935	3,757	4.57	1.17	4,456	4.51	1.39	320,940	6.70	100.00
1934	3,062	3.73	1.32	3,274	3.32	1.42	231,303	4.83	100.00
1933	1,977	2.41	1.75	1,856	1.88	1.64	113,118	2.36	100.00
1932	2,080	2.53	2.21	2,323	2.35	2.46	94,260	1.97	100.00
1931 and earlier	16,698	20.33	2.34	17,393	17.62	2.43	714,657	14.92	100.00
Not Specified	2,137	2.60	3.07	22,410	22.70	32.17	69,667	1.45	100.00
TOTAL	82,146	100.00	1.71	98,712	100.00	2.06	4,790,783	100.00	100.00

† Includes 21,347 rental trucks and service trucks operated by passenger carriers.

AVERAGE ANNUAL MILES PER POWER UNIT CERTIFIED TO "SINGLE* UNIT" & FLEET OPERATORS

Segregated by "Local" & "Over-the-Road" Operations

(As of About the End of 1943)

Vocational Group	LOCAL			OVER-THE-ROAD			TOTAL		
	Single* (1 & 2 units)	Fleet (3 or more)	Total	Single* (1 & 2 units)	Fleet (3 or more)	Total	Single* (1 & 2 units)	Fleet (3 or more)	Total
A. Property Carrier Group									
Governmental Agencies	5,848	8,508	8,182	14,614	12,448	12,509	6,017	8,851	8,525
Agriculture	7,150	10,856	7,324	17,356	17,832	17,426	7,374	11,562	7,597
Extractive Industries	11,096	13,912	12,792	17,737	18,317	18,167	11,900	14,824	13,733
Construction Industries	6,238	12,594	8,103	12,946	15,858	14,969	6,424	13,035	8,527
Processing Industries	9,005	11,888	10,688	19,850	19,742	19,760	10,080	14,162	12,684
Wholesale Distribution	9,767	9,372	9,510	20,574	17,557	18,214	11,833	11,929	11,899
Consumer Distribution	7,393	8,585	7,881	17,314	17,288	17,299	7,886	9,403	8,525
For-Hire Carriers:									
Intercity Common Carriers				26,367	30,567	29,506	26,367	30,567	29,506
Local Common Carriers	9,431	10,141	9,849				9,431	10,140	9,849
Contract Carriers	13,961	16,739	14,710	27,027	28,565	27,729	16,124	20,417	17,450
Tank—For-Hire Uses	13,600	19,620	16,286	55,310	64,175	62,955	27,096	54,735	46,998
TOTAL—For-Hire	12,991	13,622	13,219	27,141	31,861	30,305	16,521	23 553	19,912
Other Public Utilities	8,518	8,095	8,145	16,229	12,494	13,016	9,279	8,492	8,560
Business, Professional and Personal Services	6,791	8,319	7,114	13,367	11,395	12,334	7,211	8,993	7,644
Institutional Agencies	5,485	6,890	6,304	11,728	10,294	10,675	5,651	7,081	6,502
Tank Trucks—Private Uses	10,393	11,261	10,766	25,508	33,167	30,960	11,997	17,416	14,613
Personal Transportation	5,722	20,562	5,809	17,131	30,549	17,884	6,053	23,044	6,210
Not Classified	3,660		3,660	9,705		9,705	3,838		3,838
TOTAL—Property Carrier Group	7,696	10,231	8,441	21,837	23,942	23,240	8,573	13,551	10,268
B. Passenger Carrier Group									
Ambulances and Hearses	6,358	7,441	6,974	9,121	9,209	9,185	6,415	7,514	7,045
School Buses	8,692	8,141	8,439	11,722	11,402	11,549	8,709	8,166	8,458
Taxicabs	30,867	37,247	34,947				30,867	37,247	34,947
Rental Cars	13,105	11,538	11,594	2,880	23,372	21,852	12,787	11,712	11,752
City and Suburban Buses	30,286	36,975	36,667				30,286	36,975	36,667
Intercity Buses				40,736	61,696	60,501	40,736	61,696	60,501
TOTAL—Passenger Carrier Group	15,198	24,207	21,156	29,295	57,695	55,384	15,486	27,615	23,737

* "Single" means operations with one (1) and two (2) units.

TRUCKS, TRUCK-TRACTORS & TRAILERS BY COMMODITIES HAULED & TYPES OF SERVICE

Segregated by 'Single' (1 & 2 Units), 'Fleet' and Local & Over-the-Road Operations

(As of About the End of 1943)

Vocational Group	Power Units Operated by Carriers Engaged Predominantly in the Service Indicated									Trailers and Semi-Trailers		
	Local			Over-the-Road			Totals					
	Single (1 and 2 units)	Fleet (3 or more)	Total	Single (1 and 2 units)	Fleet (3 or more)	Total	Single (1 and 2 units)	Fleet (3 or more)	Total	Single (1 and 2 units)	Fleet (3 or more)	Total
GOVERNMENTAL AGENCIES												
Mixed or General Commodities	802	39,900	40,702	29	1,820	1,849	831	41,720	42,551	1	1,678	1,679
Service Operations	3,270	40,355	43,625	190	6,497	6,687	3,460	46,852	50,312	2	1,701	1,703
Fire Fighting	9,803	16,645	26,448	9	1,374	1,383	9,812	17,419	27,231	1	326	327
Policing	492	1,016	1,498	31	206	237	513	1,222	1,735	.....	9	9
Public Health, Garbage and Sanitation	1,303	6,240	7,543	28	35	63	1,331	6,275	7,606	3	388	371
Mail	1,843	7,730	9,573	47	77	124	1,890	7,807	9,697	.....	.....	.....
Highway Maintenance and Repairs	6,923	70,451	77,374	105	7,368	7,473	7,028	77,819	84,847	3	3,940	3,943
Other Mixed Service or Not Classified	527	823	1,350	32	113	145	559	936	1,495	.....	31	31
Other Public Utilities	478	1,191	1,669	5	8	13	483	1,199	1,682	.....	68	68
Construction Service	142	843	985	8	115	123	150	958	1,108	.....	21	21
Miscellaneous, All Other	329	621	950	26	52	78	355	673	1,028	2	24	26
TOTAL	25,902	185,215	211,117	510	17,665	18,175	26,412	202,880	229,292	12	8,166	8,178
AGRICULTURE												
Mixed or General Commodities	23,504	1,042	24,546	1,272	243	1,515	24,776	1,285	26,061	62	89	151
Highway Maintenance and Repairs	857	14	871	7	.....	7	864	14	878	.....	.....	.....
Solid Fuels	3,075	15	3,090	67	3	70	3,142	18	3,160	1	1	2
Quarry Products	390	46	436	16	.....	16	396	46	442	.....	.....	.....
Timber	3,133	216	3,349	202	22	224	3,335	238	3,573	31	28	59
Mixed and Other Farm Products	1,253,895	51,198	1,305,073	24,819	5,445	30,264	1,278,704	56,633	1,335,337	1,290	5,450	6,740
Live Animals	35,763	2,773	38,536	2,626	698	3,324	38,389	3,471	41,860	113	351	464
Live Poultry	11,096	683	11,779	330	144	474	11,426	827	12,253	4	29	33
Crude Animal and Poultry Products (Edible)	44,523	5,082	49,605	965	302	1,267	45,488	5,384	50,872	15	211	226
Fresh Fruits and Vegetables	39,632	6,856	46,288	1,280	1,007	2,287	40,912	7,863	48,575	40	764	804
Grain	5,254	387	5,641	106	54	160	5,360	441	5,801	6	59	65
Animal Feeds	4,922	354	5,276	134	25	159	5,056	379	5,435	10	67	77
Dried Fruits and Vegetables	847	229	876	10	42	52	857	271	928	28	55	83
Animal and Vegetable Fibres—Unprocessed	1,960	125	2,085	33	17	50	1,993	142	2,135	90	60	150
Agricultural Equipment	581	45	626	19	.....	19	600	45	645	3	.....	3
Agricultural Farm Supplies	847	290	1,137	59	30	89	906	320	1,226	4	33	37
Agricultural Dairy Products, Processed	444	733	1,177	8	44	52	452	777	1,229	1	11	12
Horticulture, Floriculture and Florists	2,135	1,126	3,261	39	158	197	2,174	1,284	3,458	1	49	50
Other, Mixed Service or Not Classified	44,350	1,397	45,747	997	78	1,075	45,347	1,475	46,822	30	311	341
Miscellaneous, All Other	2,546	386	2,932	148	54	202	2,694	440	3,134	4	19	23
TOTAL	1,479,524	72,787	1,552,321	33,137	8,366	41,503	1,512,671	81,153	1,593,824	1,723	7,597	9,320
EXTRACTIVE INDUSTRIES												
Mixed Raw Materials, except Agriculture	614	734	1,348	75	166	241	689	900	1,589	3	67	70
Ores and Concentrates	1,918	4,256	6,174	262	410	672	2,180	4,666	6,846	6	197	203
Solid Fuels	2,190	4,954	7,144	150	284	434	2,330	5,248	7,578	4	277	281
Crude Petroleum	740	3,036	3,776	82	1,255	1,337	822	4,291	5,113	7	1,132	1,139
Quarry Products	1,237	7,328	8,565	55	652	707	1,292	7,980	9,272	8	437	445
Timber	9,940	10,842	20,782	1,510	3,784	5,294	11,450	14,626	26,076	870	4,074	4,944
Structural Metal	21	20	41	1	.....	1	22	20	42	.....	.....	.....
Industrial Machinery and Parts	1,113	616	1,729	192	211	403	1,305	827	2,132	9	99	108
Other Mixed Service or Not Classified	6,932	6,573	13,505	978	2,501	3,479	7,910	9,074	16,984	39	1,524	1,563
Construction Service	2,546	2,888	5,434	365	1,492	1,857	2,911	4,380	7,291	17	1,030	1,047
Miscellaneous, All Other	1,059	1,594	2,653	228	434	662	1,287	2,028	3,315	8	292	300
TOTAL	28,300	42,851	71,151	3,898	11,189	15,087	32,198	54,040	86,238	971	9,129	10,100
CONSTFUCTION INDUSTRIES												
Mixed or General Commodities	478	1,939	2,417	28	322	350	506	2,261	2,767	2	196	198
Highway Maintenance and Repairs	3,925	7,731	11,716	145	1,209	1,354	4,130	8,940	13,070	9	607	616
Mixed Raw Materials, except Agriculture	232	1,217	1,449	17	138	155	249	1,355	1,604	.....	123	123
Quarry Products	4,201	10,820	15,021	184	1,254	1,438	4,385	12,074	16,459	4	623	627
Other and Mixed Industrial Basic Materials	1,552	3,846	5,398	68	819	887	1,620	4,665	6,285	12	355	367
Chemicals	719	37	756	16	31	47	735	68	803	4	6	10
Lumber	383	157	540	20	19	39	383	176	559	3	21	24
Building Material and Clay Products	8,593	7,003	15,596	214	677	891	8,797	7,680	16,477	11	352	363
Structural Metal	544	318	862	27	106	133	571	424	995	2	36	38
Scrap and Waste	1,011	948	1,959	91	216	307	1,102	1,164	2,266	4	46	50
Furniture and Household Furnishings	954	12	966	15	10	25	969	22	991	.....	.....	.....
Other Mixed Service or Not Classified	22,558	3,569	26,127	1,173	712	1,885	23,731	4,281	28,012	19	275	294
Carriers Other Than Motor Carriers	9,705	2,239	11,944	211	309	520	9,916	2,548	12,464	.....	69	69
Telephone, Telegraph and Radio	532	188	720	19	24	43	551	212	763	.....	24	24
Construction Service	222,195	74,026	296,221	5,619	11,836	17,455	227,814	85,862	313,676	121	4,276	4,397
Miscellaneous, All Other	1,670	1,902	3,572	108	410	518	1,778	2,312	4,090	11	352	363
TOTAL	279,282	115,952	395,234	7,955	18,092	26,047	287,237	134,044	421,281	202	7,361	7,563
PROCESSING INDUSTRIES												
Mixed or General Commodities	1,086	2,480	3,566	132	1,410	1,542	1,218	3,890	5,108	20	604	624
Quarry Products	416	1,345	1,761	36	140	176	452	1,485	1,937	3	47	50
Timber	6,955	8,825	15,780	1,338	3,616	4,954	8,293	12,441	20,734	498	3,735	4,233
Mixed and Other Farm Products	782	562	1,344	138	796	934	920	1,358	2,278	45	198	243
Crude Animal and Poultry Products (Edible)	462	788	1,250	62	606	668	524	1,394	1,918	1	87	88
Crude Animal and Poultry Products, Inedible—except Fibres	567	1,311	1,878	156	1,257	1,413	723	2,568	3,291	.....	149	149
Fresh Fruits and Vegetables	336	1,728	2,064	52	671	723	388	2,399	2,787	9	309	318
Grain	697	333	1,030	38	250	288	735	583	1,318	6	99	105
Animal Feeds	968	716	1,684	97	567	664	1,065	1,283	2,348	19	260	279
Animal and Vegetable Fibres—Unprocessed	1,077	372	1,449	129	293	422	1,206	665	1,871	74	209	283

CONTINUED ON NEXT PAGE

Trucks, Truck-Tractors & Trailers by Commodities Hauled & Types of Service (Continued)

Vocational Group	Power Units Operated by Carriers Engaged Predominantly in the Service Indicated									Trailers and Semi-Trailers		
	Local			Over-the-Road			Totals					
	Single (1 and 2 units)	Fleet (3 or more)	Total	Single (1 and 2 units)	Fleet (3 or more)	Total	Single (1 and 2 units)	Fleet (3 or more)	Total	Single (1 and 2 units)	Fleet (3 or more)	Total
PROCESSING INDUSTRIES (Cont'd)												
Other and Mixed Industrial Basic Materials	808	893	1,701	52	236	288	860	1,129	1,989	2	298	300
Chemicals	1,473	2,030	3,503	122	701	823	1,600	2,731	4,331	8	483	491
Oils and Greases, in Containers	293	1,238	1,534	42	502	544	340	1,739	2,123	10	258	268
Paper Stock	917	2,063	2,910	102	744	843	1,019	2,807	3,826	28	556	584
Lumber	3,031	4,818	7,849	543	2,595	3,101	3,574	7,333	10,957	147	1,810	1,957
Building Material and Clay Products	1,873	5,319	7,252	163	1,777	1,945	2,041	7,155	9,207	31	1,064	1,095
Structural Metal	4,090	4,390	8,480	273	992	1,265	4,333	5,332	9,745	22	869	891
Structural Glass and Stone	1,079	327	1,406	123	102	225	1,232	429	1,631	1	41	42
Scrap and Waste	320	343	663	13	260	273	333	603	941	3	66	69
Mixed Industrial and War Equipment	2,730	5,075	7,805	160	1,034	1,194	2,890	6,109	8,999	10	1,637	1,647
Aircraft	1,119	1,809	2,927	76	119	195	1,194	1,928	3,122	.....	369	369
Vehicles and Parts	700	611	1,311	61	254	315	761	865	1,626	2	134	136
Boats and Marine Equipment	532	1,337	1,979	23	91	119	610	1,428	2,093	3	199	202
Munitions and Explosives	243	815	1,034	52	373	425	331	1,188	1,419	2	141	143
Industrial Machinery and Parts	2,479	1,756	4,235	127	547	674	2,606	2,303	4,909	7	270	277
Other Industrial Equipment	1,109	894	2,003	77	143	220	1,186	1,037	2,223	7	130	137
Other and Mixed Processed Necessaries	657	1,319	1,976	61	1,130	1,191	718	2,449	3,167	4	202	206
Farm Supplies	431	837	1,148	93	332	430	579	1,059	1,638	14	322	336
Dairy Products, Processed	1,331	2,643	4,034	149	1,901	2,050	1,540	4,544	6,084	4	162	166
Packing House Products	505	2,714	3,219	53	1,770	1,823	558	4,484	5,042	1	275	276
Processed Foods and Groceries, except Beverages	2,370	4,937	7,307	444	2,935	3,379	2,814	7,822	10,633	46	1,295	1,341
Apparel	1,114	317	1,431	141	140	281	1,255	457	1,712	7	109	116
Drugs, Medicines and Toilet Preparations	1,133	725	1,903	121	292	413	1,314	1,037	2,311	3	22	25
Furniture and Household Furnishings	2,826	886	3,712	253	535	791	3,032	1,421	4,533	13	196	209
Printed Matter	1,602	2,323	3,925	50	193	243	1,852	2,511	4,193	2	45	47
Textiles	1,720	1,613	3,333	103	410	513	1,823	2,023	3,851	12	228	240
Other and Mixed Accessories	408	531	939	30	170	200	433	701	1,139	.....	74	74
Alcoholic Liquors	155	2,107	2,262	37	527	564	192	2,634	2,826	5	322	327
Non-Alcoholic Beverages	314	1,152	1,466	29	392	391	343	1,544	1,857	6	20	26
Manufactured Tobacco	233	500	735	65	413	478	301	913	1,214	1	22	23
Other, Mixed Service or Not Classified	3,503	1,641	5,144	213	307	525	3,721	1,948	5,669	11	181	192
Construction Service	481	545	1,026	50	118	168	531	663	1,194	1	90	91
Miscellaneous, All Other	2,031	2,598	4,627	185	701	886	2,216	3,297	5,513	14	395	409
TOTAL	57,184	79,577	136,761	6,292	32,277	38,569	63,476	111,854	175,330	1,102	17,982	19,084
WHOLESALE DISTRIBUTION												
Mixed or General Commodities	1,351	1,876	3,227	339	1,551	1,939	1,739	3,427	5,166	22	361	383
Mixed Raw Materials, except Agriculture	86	320	406	37	60	97	123	330	503	4	20	24
Solid Fuels	530	550	1,130	111	125	236	691	675	1,366	10	42	52
Ice	432	778	1,210	26	110	136	458	888	1,346	3	29	32
Quarry Products	140	803	943	15	115	130	155	923	1,078	.....	55	55
Timber	611	772	1,383	237	430	747	871	1,252	2,130	34	348	382
Mixed and Other Farm Products	3,907	1,914	5,721	1,821	2,915	4,913	5,835	4,933	10,534	100	550	650
Live Animals	2,707	328	3,033	1,025	287	1,312	3,732	615	4,345	25	61	86
Live Poultry	1,153	381	1,534	437	610	1,037	1,640	991	2,631	7	63	70
Crude Animal and Poultry Products (Edible)	4,229	3,255	7,484	1,154	1,735	2,389	5,383	4,990	10,373	24	197	221
Fresh Fruits and Vegetables	8,939	5,737	14,703	4,444	7,515	11,959	13,413	13,252	26,665	232	1,260	1,492
Grain	339	639	977	85	311	396	333	910	1,373	10	132	142
Animal Feeds	484	573	1,092	209	512	721	693	1,085	1,778	53	254	307
Other and Mixed Industrial Basic Materials	601	1,057	1,658	73	339	442	674	1,423	2,100	4	147	151
Chemicals	977	554	1,531	149	300	449	1,126	854	1,980	8	151	159
Oils and Greases, in Containers	3,693	3,230	6,923	543	1,312	1,855	4,233	4,632	8,865	16	320	336
Paper Stock	1,180	671	1,851	102	216	318	1,282	957	2,239	2	120	122
Lumber	1,033	1,993	3,026	394	1,334	1,728	1,432	3,332	4,764	93	822	915
Building Material and Clay Products	2,118	4,214	6,332	147	634	781	2,265	4,841	7,113	10	390	400
Structural Metal	570	1,107	1,677	37	320	357	607	1,427	2,034	11	172	183
Scrap and Waste	520	798	1,318	83	455	538	603	1,253	1,856	5	294	299
Vehicles and Parts	2,916	1,842	4,758	841	788	1,629	3,757	2,630	6,387	9	28	37
Other and Mixed Processed Necessaries	2,902	3,450	6,352	814	2,126	2,940	3,516	5,776	9,292	10	533	543
Farm Supplies	596	546	1,142	172	543	715	768	1,039	1,857	13	172	185
Dairy Products, Processed	3,433	16,718	20,151	372	4,539	4,911	3,810	21,252	25,062	5	433	438
Packing House Products	6,639	8,880	15,519	873	4,755	5,628	7,512	13,635	21,147	14	503	517
Processed Foods and Groceries, except Beverages	14,227	45,025	59,252	2,403	22,616	25,019	16,630	67,641	84,271	60	3,621	3,681
Drugs, Medicines and Toilet Preparations	1,842	1,002	2,844	615	295	910	2,457	1,297	3,754	1	45	46
Furniture and Household Furnishings	1,550	934	2,484	203	270	473	1,753	1,204	2,957	4	80	84
Printed Matter	2,260	3,097	5,357	345	449	794	2,605	3,543	6,151	.....	13	13
Other and Mixed Consumer Accessories	2,394	6,217	8,611	437	2,752	3,189	2,831	8,969	11,800	1	252	253
Alcoholic Liquors	2,604	11,676	14,280	515	5,179	5,694	3,119	16,855	19,974	15	949	964
Non-Alcoholic Beverages	3,097	25,035	28,132	534	5,388	5,902	3,631	30,403	34,034	6	457	463
Confectioneries	1,846	1,339	3,185	405	233	638	2,251	1,622	3,873	3	9	12
Manufactured Tobacco	1,023	1,747	2,770	382	2,111	2,493	1,405	3,858	5,263	.....	3	3
Horticulture, Floriculture and Florists	1,865	906	2,571	154	237	391	1,819	1,143	2,962	1	29	30
Laundry, Cleaning, Dyeing and Tailoring	1,860	4,455	6,315	69	863	932	1,929	5,318	7,247	2	49	51
Miscellaneous, All Other	2,887	2,617	5,504	571	1,147	1,718	3,453	3,764	7,222	28	336	414
TOTAL	89,280	167,134	256,414	21,109	75,927	97,036	110,389	243,061	353,450	845	13,375	14,220
CONSUMER DISTRIBUTION												
Mixed or General Commodities	11,675	12,990	24,665	1,157	1,594	2,751	12,832	14,584	27,416	45	717	763
Mixed Raw Materials, except Agriculture	2,908	3,769	6,677	133	355	488	3,041	4,124	7,165	1	125	126
Solid Fuels	40,927	33,220	74,147	2,706	2,832	5,538	43,533	36,152	79,685	88	926	1,014
Ice	11,636	12,261	23,897	223	453	676	11,859	12,714	24,573	9	172	181
Mixed Ice and Solid Fuels	9,539	13,388	22,927	187	551	721	9,706	13,942	23,648	5	170	175
Gas	958	461	1,419	211	205	416	1,169	666	1,835	4	87	91
Quarry Products	600	1,791	2,391	37	86	123	637	1,877	2,514	7	72	79
Timber	958	408	1,366	223	130	353	1,181	538	1,719	27	77	104
Mixed and Other Farm Products	10,019	2,403	12,422	1,673	1,058	2,731	11,692	3,461	15,153	61	257	318
Live Animals	2,295	34	2,329	618	65	683	2,913	99	3,012	16	7	23
Live Poultry	1,804	196	2,000	266	158	424	2,070	354	2,424	2	8	10
Crude Animal and Poultry Products (Edible)	7,803	7,617	15,420	536	555	1,111	8,339	8,172	16,531	22	110	132
Fruits and Vegetables	18,312	614	18,926	1,314	301	1,615	19,626	915	20,541	52	50	102
Grain	486	585	1,071	81	166	247	567	751	1,318	12	58	70
Animal Feeds	5,027	2,008	7,035	379	525	904	5,406	2,533	7,939	35	142	177
Dried Fruits and Vegetables	47	53	100	5	3	8	52	56	108	.....	1	1
Other and Mixed Industrial Basic Materials	4,605	8,284	12,889	167	663	830	4,772	8,947	13,719	20	435	455
Chemicals	1,908	548	2,456	157	174	331	2,065	722	2,787	3	165	168
Oils and Greases, in Containers	4,018	1,144	5,162	349	178	527	4,367	1,322	5,689	17	33	50
Lumber	7,342	10,435	17,777	418	1,335	1,753	7,760	11,770	19,530	115	1,433	1,548
Building Material and Clay Products	4,565	7,136	11,701	179	556	735	4,744	7,692	12,436	21	316	337
Structural Metal	1,899	596	2,495	40	61	110	1,948	657	2,605	7	59	66

Vocational Group	Power Units Operated by Carriers Engaged Predominantly in the Service Indicated									Trailers and Semi-Trailers		
	Local			Over-the-Road			Totals					
	Single (1 and 2 units)	Fleet (3 or more)	Total	Single (1 and 2 units)	Fleet (3 or more)	Total	Single (1 and 2 units)	Fleet (3 or more)	Total	Single (1 and 2 units)	Fleet (3 or more)	Total
CONSUMER DISTRIBUTION (Cont'd)												
Structural Clay and Stone	1,892	345	2,237	205	59	264	2,097	404	2,501	2	3	5
Scrap and Waste	613	176	789	87	93	180	700	269	969	4	42	46
Vehicles and Parts	3,299	1,363	4,662	266	316	582	3,565	1,679	5,244	2	20	22
Munitions and Explosives	79	35	114	54	66	120	133	101	234	4	.....	4
Agricultural Equipment	5,295	2,991	8,286	539	698	1,237	5,834	3,689	9,523	41	315	356
Industrial Machinery and Parts	916	509	1,425	128	454	582	1,044	963	2,007	8	164	172
Other and Mixed Processed Necessaries	29,891	8,864	38,755	1,325	1,274	2,599	31,216	10,133	41,354	21	631	652
Farm Supplies	3,506	1,805	5,311	272	483	755	3,778	2,288	6,066	22	155	177
Dairy Products, Processed	11,698	44,772	56,470	245	3,076	3,321	11,943	47,843	59,791	11	1,194	1,205
Packing House Products	8,288	1,203	9,491	288	136	424	8,576	1,339	9,915	4	19	23
Processed Foods and Groceries, except Beverages	69,656	22,535	92,191	1,961	3,716	5,677	71,617	26,251	97,868	39	1,092	1,131
Apparel	1,503	223	1,726	123	8	131	1,626	231	1,857	1	.....	1
Drugs, Medicines and Toilet Preparations	4,100	370	4,470	299	53	352	4,399	423	4,822	1	26	27
Furniture and Household Furnishings	32,376	10,614	42,990	1,081	806	1,887	33,457	11,420	44,877	22	99	121
Printed Matter	1,461	128	1,589	44	4	48	1,505	132	1,637	3	.....	3
Textiles	827	180	1,007	74	9	83	901	189	1,090	3	.....	3
Other and Mixed Consumer Accessories	1,870	847	2,717	138	118	256	2,008	965	2,973	1	75	76
Alcoholic Liquors	1,773	562	2,335	66	108	174	1,839	670	2,509	3	18	21
Non-Alcoholic Beverages	2,007	1,212	3,219	127	204	331	2,134	1,416	3,550	.....	5	5
Confectioneries	1,021	138	1,159	106	27	133	1,127	165	1,292	.....	1	1
Furs, Musical Instruments and Sporting Goods	1,256	144	1,400	113	86	199	1,369	230	1,599	.....	.....	.....
Office or Store Furniture and Fixtures	1,333	176	1,509	77	46	123	1,410	222	1,632	.....	.....	.....
Horticulture Floriculture and Florists	11,093	2,012	13,105	234	220	454	11,327	2,232	13,559	7	32	39
Other, Mixed Service or Not Classified	2,016	666	2,682	153	121	274	2,169	787	2,956	1	21	22
Construction Service	3,943	985	4,928	73	95	168	4,016	1,080	5,096	1	7	8
Laundry, Cleaning, Dyeing and Tailoring	24,308	37,765	62,073	530	2,425	2,955	24,838	40,190	65,028	7	105	112
Miscellaneous, All Other	1,898	1,010	2,908	166	357	523	2,064	1,367	3,431	4	157	161
TOTAL	377,249	261,571	638,820	19,742	27,165	43,907	396,991	288,736	685,727	782	9,599	10,381
PUBLIC UTILITIES												
Contract Carriers—Except Tank Trucks												
Mixed or General Commodities	16,357	8,536	24,893	4,189	4,280	8,469	20,546	12,816	33,362	327	2,021	2,348
Service Operations	251	183	434	35	70	105	286	253	539	1	36	37
Public Health, Garbage and Sanitation	9,538	3,291	12,829	119	75	194	9,657	3,366	13,023	23	108	131
Mail	7,855	749	8,604	1,318	212	1,530	9,173	961	10,134	4	22	26
Highway Maintenance and Repairs	3,695	757	4,452	160	108	268	3,855	865	4,720	.....	63	63
Mixed Raw Materials, except Agriculture	7,933	2,919	10,852	909	536	1,445	8,842	3,455	12,297	44	258	302
Ores and Concentrates	822	780	1,602	122	229	351	944	1,009	1,953	2	70	72
Solid Fuels	22,501	4,618	27,119	3,154	933	4,087	25,655	5,551	31,206	144	307	451
Quarry Products	22,642	17,250	39,892	1,346	2,702	4,048	23,988	19,952	43,940	28	743	771
Timber	27,812	5,685	33,497	4,961	2,535	7,496	32,773	8,220	40,993	2,145	2,705	4,850
Mixed and Other Farm Products	21,189	3,424	24,613	7,732	3,365	11,097	28,921	6,789	35,719	672	1,219	1,891
Live Animals	4,743	547	5,290	3,220	1,326	4,546	7,963	1,873	9,836	253	697	940
Crude Animal and Poultry Products, Edible	13,414	2,279	15,693	2,840	1,411	4,251	16,254	3,690	19,944	58	287	345
Fresh Fruits and Vegetables	3,606	1,761	5,367	1,727	1,151	2,878	5,333	2,912	8,245	250	969	1,219
Grain	559	143	702	169	144	313	728	287	1,015	26	41	67
Animal Feeds	1,026	198	1,224	326	195	521	1,352	393	1,745	85	78	163
Other and Mixed Industrial Basic Materials	824	769	1,593	129	487	616	953	1,256	2,209	25	300	325
Chemicals	347	367	714	70	219	289	417	586	1,003	13	83	96
Oils and Greases, in Containers	566	177	743	103	177	280	669	354	1,023	24	86	110
Paper Stock	326	342	668	100	472	572	426	814	1,240	21	446	467
Lumber	2,608	965	3,573	856	531	1,387	3,464	1,496	4,960	303	431	739
Building Material and Clay Products	3,393	3,607	7,000	464	978	1,442	3,857	4,585	8,442	101	639	740
Structural Metal	778	816	1,594	272	487	759	1,050	1,303	2,353	76	646	722
Scrap and Waste	3,651	1,063	4,714	557	340	897	4,208	1,403	5,611	41	154	195
Mixed Industrial and War Equipment	527	683	1,210	148	757	905	675	1,440	2,115	25	504	529
Vehicles and Parts	249	66	315	290	464	754	539	530	1,069	37	347	384
Industrial Machinery and Parts	798	691	1,489	289	901	1,190	1,087	1,592	2,679	40	755	795
Other Industrial Equipment	225	271	496	64	495	559	289	766	1,055	19	335	404
Other and Mixed Processed Necessaries	740	1,025	1,765	166	872	1,038	906	1,897	2,803	23	533	566
Farm Supplies	1,403	447	1,850	363	188	551	1,766	635	2,401	25	86	111
Dairy Products, Processed	404	187	591	127	238	365	531	425	956	9	101	110
Packing House Products	343	390	733	114	794	908	457	1,184	1,641	32	312	344
Processed Foods and Groceries, except Beverages	1,132	1,120	2,252	229	1,428	1,657	1,361	2,548	3,909	29	844	873
Furniture and Household Furnishings	2,996	788	3,784	204	293	497	3,200	1,081	4,281	13	116	129
Printed Matter	1,070	423	1,493	241	321	562	1,311	744	2,055	.....	20	20
Construction Service	965	1,259	2,164	128	979	1,107	1,033	2,238	3,271	4	189	193
Miscellaneous, All Other[1]	3,295	1,701	4,996	550	1,027	1,577	3,845	2,728	6,573	69	534	653
TOTAL	190,523	70,277	260,800	37,791	31,720	69,511	228,314	101,997	330,311	5,001	17,130	22,181
Common Carriers—except Tank Trucks												
Mixed Common Carrier Service	1,689	2,648	4,337	436	1,499	1,935	2,175	4,147	6,322	70	585	655
Intercity, General Commodities	.....	.....	.....	15,016	92,634	107,650	15,016	92,634	107,650	1,813	58,168	59,981
Intercity, Household Goods	.....	.....	.....	2,059	7,295	9,353	2,059	7,295	9,353	51	1,432	1,483
Intercity Agricultural Products	.....	.....	.....	18,097	9,091	27,188	18,097	9,091	27,188	967	2,690	3,657
Intercity, Other Limited Commodities	.....	.....	.....	7,114	15,965	23,079	7,114	15,965	23,079	424	7,326	7,750
Local, City Trucking and Drayage	51,431	64,147	115,578	.....	.....	.....	51,431	64,147	115,578	240	9,212	9,452
TOTAL	53,120	66,795	119,915	42,771	126,494	169,255	95,891	193,279	289,170	3,565	79,413	82,978
Other Public Utilities												
Other Mixed Service, or Not Classified[2]	1,723	1,827	3,550	187	548	735	1,910	2,375	4,285	13	443	456
Carriers Other Than Motor Carriers	486	1,573	2,059	95	318	413	581	1,891	2,472	5	236	241
Telephone, Telegraph and Radio	2,749	20,909	23,658	390	1,504	1,894	3,139	22,413	25,552	93	4,313	4,406
All Other Public Utilities	4,164	42,394	47,558	328	3,783	4,111	4,492	47,177	51,669	37	6,396	6,433
TOTAL	9,122	67,703	76,825	1,000	6,153	7,153	10,122	73,856	83,978	148	11,388	11,536
Total All Public Utilities—except Tank Trucks	252,765	204,775	457,540	81,562	164,357	245,919	334,327	369,132	703,459	8,714	107,981	116,695

CONTINUED ON NEXT PAGE

Trucks, Truck-Tractors & Trailers by Commodities Hauled & Types of Service (Continued)

Vocational Group	Power Units Operated by Carriers Engaged Predominantly in the Service Indicated									Trailers and Semi-Trailers		
	Local			Over-the-Road			Totals					
	Single (1 and 2 units)	Fleet (3 or more)	Total	Single (1 and 2 units)	Fleet (3 or more)	Total	Single (1 and 2 units)	Fleet (3 or more)	Total	Single (1 and 2 units)	Fleet (3 or more)	Total
TANK Power Units—Wholesale Distribution												
Mixed Liquids	6,985	15,160	22,145	1,654	6,456	8,110	8,639	21,616	30,255	173	3,572	3,745
Motor Fuel	3,347	2,364	5,711	990	1,766	2,756	4,337	4,130	8,467	126	705	831
Fuel Oil	327	588	915	72	283	355	399	871	1,270	8	150	159
Milk	48	26	74	65	222	287	113	248	361	17	147	164
TOTAL	10,707	18,138	28,845	2,781	8,727	11,508	13,488	26,865	40,353	324	4,574	4,899
TANK Power Units—Consumer Distribution												
Mixed Liquids	17,649	5,542	23,191	1,264	1,753	3,017	18,913	7,295	26,208	93	639	732
Motor Fuel	3,182	503	3,685	357	235	592	3,539	738	4,277	53	102	160
Fuel Oil	8,232	5,377	13,609	116	220	336	8,348	5,597	13,945	14	171	185
TOTAL	29,063	11,422	40,485	1,737	2,208	3,945	30,800	13,630	44,430	165	912	1,077
TANK Power Units For-Hire												
Mixed Liquids	1,094	1,091	2,185	358	2,655	3,013	1,452	3,746	5,198	142	2,023	2,165
Motor Fuel	501	182	683	145	417	562	646	599	1,245	56	287	343
Fuel Oil	379	192	571	75	148	223	454	340	794	22	119	141
Intercity and City For-Hire	796	767	1,563	747	5,082	5,829	1,543	5,849	7,392	305	3,904	4,209
TOTAL	2,770	2,232	5,002	1,325	8,302	9,627	4,095	10,534	14,629	525	6,333	6,858
Miscellaneous, All Other Tank Power Units	1,429	1,367	2,796	373	1,150	1,523	1,802	2,517	4,319	95	850	945
TOTAL all Tank Trucks	43,969	33,159	77,128	6,216	20,387	26,603	50,185	53,546	103,731	1,110	12,669	13,779
BUSINESS, PROFESSIONAL AND PERSONAL SERVICES												
Public Health, Garbage and Sanitation	5,549	946	6,495	104	89	193	5,653	1,035	6,688	4	39	43
Scrap and Waste	33,091	9,166	42,257	2,888	2,792	5,680	35,979	11,958	47,937	121	855	976
Furs, Musical Instruments and Sporting Goods	897	169	1,066	172	61	233	1,069	230	1,299	3	21	24
Other, Mixed Service or Not Classified	39,630	8,252	47,882	2,264	2,438	4,702	41,894	10,690	52,584	103	1,844	1,947
Construction Service	2,580	447	3,027	88	116	204	2,668	563	3,231	6	28	34
Laundry, Cleaning, Dyeing and Tailoring	255	919	1,174	3	133	136	258	1,052	1,310	1	7	8
Finance	770	690	1,460	7	16	23	777	706	1,483	.....	5	5
Information	2,133	1,756	3,889	210	490	700	2,343	2,246	4,589	2	33	35
Miscellaneous, All Other	7,220	2,341	9,561	548	784	1,330	7,768	3,125	10,891	16	408	424
TOTAL	92,125	24,686	116,811	6,282	6,919	13,201	98,407	31,605	130,012	256	3,240	3,496
INSTITUTIONAL AGENCIES												
Mixed or General Commodities	941	2,142	3,083	30	164	194	971	2,306	3,277	1	58	59
Service Operations	430	1,376	1,806	23	144	167	453	1,520	1,973	.....	46	46
Scrap and Waste	131	1,149	1,280	6	49	55	137	1,198	1,335	.....	12	12
Other, Mixed Service or Not Classified	5,456	5,958	11,414	145	279	424	5,601	6,237	11,838	5	220	225
Miscellaneous, All Other	975	738	1,713	39	37	76	1,014	775	1,789	.....	13	13
TOTAL	7,933	11,363	19,296	243	673	916	8,176	12,036	20,212	6	349	355
PERSONAL TRANSPORTATION	148,653	871	149,524	4,847	288	5,135	153,500	1,159	154,659	20	68	88
NOT CLASSIFIED	2,009	.....	2,009	61	.....	61	2,070	.....	2,070	.....	.....	.....
TOTAL PROPERTY CARRIERS	2,884,185	1,199,941	4,084,126	191,854	383,305	575,159	3,076,039	1,583,246	4,659,285	15,743	197,516	213,259

[1] May include a minor number of Public Utilities other than Contract Carriers [2] May include some For-Hire Motor Carriers

FLEET & NON-FLEET USE OF TRUCKS, TRUCK-TRACTORS & TRAILERS

Segregated by Local and Over-the-Road, Single* Unit and Fleet Operations

(As of About the End of 1943)

Vocational Group	LOCAL			OVER-THE-ROAD			TOTALS			TRAILERS & SEMI-TRAILERS		
	Single* (1 and 2 units)	Fleet (3 or more))	Total	Single* (1 and 2 units)	Fleet (3 or more)	Total	Single* (1 and 2 units)	Fleet (3 or more)	Total	Single* (1 and 2 units)	Fleet (3 or more)	Total
PROPERTY CARRIER GROUP												
Governmental Agencies	25,902	185,215	211,117	510	17,665	18,175	26,412	202,880	229,292	12	8,166	8,178
Agriculture	1,479,534	72,787	1,552,321	33,137	8,366	41,503	1,512,671	81,153	1,593,824	1,723	7,597	9,320
Extractive Industries	29,300	42,851	71,151	3,898	11,189	15,087	32,198	54,040	86,238	971	9,129	10,100
Construction Industries	279,282	115,952	395,234	7,955	18,092	26,047	287,237	134,044	421,281	202	7,361	7,563
Processing Industries	57,184	79,577	136,761	6,292	32,277	38,569	63,476	111,854	175,330	1,102	17,932	19,034
Wholesale Distribution	89,280	167,134	256,414	21,109	75,927	97,036	110,389	243,061	353,450	845	13,375	14,220
Consumer Distribution	377,249	261,571	638,820	19,742	27,165	46,907	396,991	288,736	685,727	782	9,599	10,381
Public Utilities (Except Tank Trucks)												
For Hire:												
Intercity Common Carriers	1,689	2,648	4,337	42,771	126,484	169,255	4,460	129,132	173,592	3,325	70,201	73,526
Local Common Carriers	51,431	64,147	115,578	.....	.....	.....	51,431	64,147	115,578	240	9,212	9,452
Contract Carriers	190,523	70,277	260,800	37,791	31,720	69,511	228,314	101,997	330,311	5,001	17,180	22,181
Other Public Utilities	9,122	67,703	76,825	1,000	6,153	7,153	10,122	73,856	83,978	143	11,398	11,536
Tank Trucks (All Uses)	43,969	33,159	77,128	6,216	20,387	26,603	50,185	53,546	103,731	1,110	12,669	13,779
Business, Professional and Personal Services	92,125	24,686	116,811	6,282	6,919	13,201	98,407	31,605	130,012	256	3,240	3,496
Institutional Agencies	7,933	11,363	19,296	243	673	916	8,176	12,036	20,212	6	349	355
Personal Transportation	148,653	871	149,524	4,847	288	5,135	153,500	1,159	154,659	20	68	88
Not Classified	2,009	.....	2,009	61	.....	61	2,070	.....	2,070	.....	.....	.....
TOTAL—Property Carrier Group	2,884,185	1,199,941	4,084,126	191,854	383,305	575,159	3,076,039	1,583,246	4,659,285	15,743	197,516	213,259

* "Single" means operations with (1) and two (2) units.

BOUNDARIES OF ODT REGIONS

REGIONAL DISTRIBUTION OF TRUCKS & TRUCK-TRACTORS BY YEAR MODEL†

(As of Aug. 31, 1944)

Year Model	REGION I			REGION II			REGION III			REGION IV			REGION V		
	Number	% of Total for Region	% of Total for Year Model	Number	% of Total for Region	% of Total for Year Model	Number	% of Total for Region	% of Total for Year Model	Number	% of Total for Region	% of Total for Year Model	Number	% of Total for Region	% of Total for Year Model
1942-44	21,954	3.03	10.17	22,243	4.38	10.30	40,421	7.18	18.72	20,398	4.56	9.45	32,313	3.95	14.97
1941	93,498	12.91	14.24	75,054	14.77	11.43	98,252	17.44	14.97	66,259	14.81	10.10	103,531	12.64	15.77
1940	80,566	11.13	14.68	63,766	12.55	11.62	75,396	13.38	13.74	55,303	12.37	10.08	90,576	11.06	16.51
1939	66,808	9.23	15.03	51,493	10.13	11.58	59,349	10.54	13.35	42,246	9.45	9.50	71,297	8.70	16.04
1938	52,528	7.25	15.68	35,852	7.05	10.71	40,010	7.10	11.95	30,065	6.72	8.98	55,479	6.77	16.56
1937	81,381	11.24	15.09	59,274	11.66	10.99	63,074	11.20	11.69	56,941	12.73	10.56	88,989	10.86	16.50
1936	76,119	10.51	15.01	57,532	11.32	11.35	53,776	9.55	10.61	50,617	11.32	9.98	87,178	10.64	17.20
1935	49,137	6.79	15.31	33,138	6.52	10.32	31,219	5.54	9.73	29,904	6.69	9.32	60,305	7.36	18.79
1934	39,652	5.48	17.14	23,699	4.66	10.25	21,688	3.85	9.37	22,036	4.93	9.53	39,047	4.77	16.88
1933	21,627	2.99	19.12	10,938	2.15	9.67	8,898	1.58	7.87	9,380	2.10	8.29	19,429	2.37	17.18
1932	21,330	2.95	22.62	11,254	2.21	11.94	7,226	1.28	7.67	7,902	1.77	8.38	15,347	1.87	16.28
1931 and Older	103,651	14.32	14.50	54,729	10.77	7.66	56,677	10.06	7.93	47,684	10.66	6.67	147,853	18.05	20.69
Unknown	15,698	2.17	22.53	9,303	1.83	13.35	7,314	1.30	10.50	8,462	1.89	12.15	7,847	.96	11.26
TOTAL	732,949	100.00	15.11	508,265	100.00	10.61	563,299	100.00	11.76	447,197	100.00	9.33	819,191	100.00	17.10

Year Model	REGION VI			REGION VII			REGION VIII			REGION IX			TOTAL		
	Number	% of Total for Region	% of Total for Year Model	Number	% of Total for Region	% of Total for Year Model	Number	% of Total for Region	% of Total for Year Model	Number	% of Total for Region	% of Total for Year Model	Number	% of Total for Region	% of Total for Year Model
1942-44	16,774	4.17	7.77	32,203	6.28	14.91	8,636	4.25	4.00	20,974	3.43	9.71	215,916	4.51	100.00
1941	52,330	13.00	7.97	75,420	14.72	11.49	22,796	11.21	3.47	69,287	11.34	10.56	656,427	13.70	100.00
1940	42,432	10.54	7.73	61,266	11.96	11.17	20,408	10.04	3.72	58,982	9.66	10.75	548,695	11.45	100.00
1939	34,707	8.62	7.81	51,427	10.04	11.57	17,930	8.82	4.03	49,332	8.08	11.09	444,578	9.28	100.00
1938	28,363	7.05	8.47	39,771	7.76	11.88	13,906	6.84	4.15	38,926	6.37	11.62	334,900	6.99	100.00
1937	42,095	10.46	7.81	61,433	11.99	11.39	22,145	10.89	4.11	63,985	10.48	11.86	539,317	11.26	100.00
1936	41,737	10.37	8.23	53,656	10.47	10.58	24,107	11.85	4.76	62,263	10.19	12.28	506,985	10.58	100.00
1935	26,384	6.56	8.22	30,679	5.99	9.56	16,052	7.89	5.00	44,122	7.22	13.75	320,940	6.70	100.00
1934	19,675	4.89	8.51	21,391	4.17	9.25	11,797	5.80	5.10	32,320	5.29	13.97	231,303	4.83	100.00
1933	10,005	2.49	8.84	9,336	1.82	8.25	5,563	2.74	4.92	17,942	2.94	15.86	113,118	2.36	100.00
1932	7,472	1.86	7.93	6,745	1.32	7.15	3,273	1.61	3.47	13,729	2.25	14.56	94,280	1.97	100.00
1931 and Older	77,084	19.16	10.79	64,646	12.62	9.05	33,658	16.55	4.71	128,675	21.07	18.00	714,657	14.92	100.00
Unknown	3,313	.83	4.76	4,409	.86	6.33	3,082	1.51	4.42	10,239	1.68	14.70	69,667	1.45	100.00
TOTAL	402,371	100.00	8.40	512,382	100.00	10.70	203,353	100.00	4.24	610,776	100.00	12.75	4,790,783	100.00	100.00

† Includes rental trucks and service equipment of passenger carriers.

REGIONAL DISTRIBUTION OF TRUCKS & TRUCK-TRACTORS BY VOCATIONAL GROUPS

(as of August 31, 1944)

Vocational Group	REGION I			REGION II			REGION III			REGION IV			REGION V		
	No. of Trucks and Tractors	% of Total for Region	% of Total for Vocational Group	No. of Trucks and Tractors	% of Total for Region	% of Total for Vocational Group	No. of Trucks and Tractors	% of Total for Region	% of Total for Vocational Group	No. of Trucks and Tractors	% of Total for Region	% of Total for Vocational Group	No. of Trucks and Tractors	% of Total for Region	% of Total for Vocational Group
A. Property Carrier Group, Private (other than For Hire):															
Governmental Agencies	41,439	5.79	17.71	36,653	7.25	15.67	28,735	5.12	12.28	23,395	5.24	10.00	33,743	4.13	14.43
Agriculture	160,149	22.37	9.70	120,202	23.78	7.29	223,939	39.92	13.56	109,574	24.56	6.64	317,960	38.90	19.26
Extractive Industries	4,251	.59	4.50	9,881	1.96	10.47	13,352	2.39	14.15	8,529	1.91	9.04	9,216	1.13	9.76
Construction Industries	79,931	11.17	18.32	53,406	10.57	12.24	35,126	6.26	8.05	44,372	9.95	10.17	69,100	8.45	15.84
Processing Industries	29,642	4.14	15.58	23,943	4.74	12.59	33,712	6.01	17.71	21,930	4.92	11.52	31,310	3.83	16.45
Wholesale Distribution	73,592	10.28	20.05	46,871	9.28	12.77	43,740	7.80	11.91	42,087	9.43	11.46	55,707	6.82	15.17
Consumer Distribution	147,177	20.56	21.71	91,667	18.14	13.52	76,713	13.67	11.31	80,904	18.13	11.93	107,495	13.15	15.85
Other Public Utilities	17,482	2.44	19.71	10,461	2.07	11.80	6,924	1.23	7.81	9,214	2.07	10.39	13,014	1.59	14.67
Business, Professional and Personal Services	31,342	4.38	24.01	13,551	2.68	10.38	10,212	1.82	7.82	12,841	2.88	9.84	20,306	2.43	15.56
Institutional Agencies	4,673	.65	22.15	2,576	.51	12.21	1,951	.35	9.25	1,893	.42	8.97	3,128	.38	14.82
Personal Transportation	8,983	1.25	5.90	10,155	2.01	6.67	16,813	3.00	11.04	11,545	2.59	7.53	11,773	1.44	7.73
Tank Trucks—All Private Uses[1]	18,659	2.61	20.52	7,637	1.51	8.40	8,205	1.46	9.03	6,442	1.44	7.09	19,953	2.44	21.95
Not Classified	23	.00	1.15	394	.08	19.72	.....	.....	.....	.....	.....	.....	740	.09	37.04
Total Private	617,343	86.23	14.93	427,402	84.59	10.33	499,422	89.02	12.07	372,726	83.54	9.01	693,450	84.83	16.76
For-Hire Carriers:															
Intercity Common Carriers	22,854	3.19	15.04	14,732	2.92	9.69	12,404	2.21	8.16	19,455	4.36	12.80	31,227	3.82	20.55
Local Common Carriers	31,134	4.35	26.29	10,544	2.09	8.90	8,208	1.46	6.93	13,407	3.01	11.32	23,610	2.87	19.83
All Contract Carriers	42,145	5.89	12.14	51,053	10.10	14.70	39,906	7.11	11.49	39,363	8.82	11.34	66,791	8.17	19.24
Tank Trucks—All For-Hire Uses[1]	2,441	.34	16.35	1,566	.31	10.49	1,126	.20	7.54	1,192	.27	7.93	2,533	.31	16.96
Total—For-Hire	98,574	13.77	15.58	77,895	15.42	12.31	61,644	10.98	9.74	73,417	16.46	11.61	124,031	15.17	19.61
TOTAL—Property Carrier Group	715,917	100.00	15.02	505,297	100.00	10.59	561,066	100.00	11.76	446,143	100.00	9.36	817,491	100.00	17.14

Vocational Group	REGION VI			REGION VII			REGION VIII			REGION IX			TOTAL		
	No. of Trucks and Tractors	% of Total for Region	% of Total for Vocational Group	No. of Trucks and Tractors	% of Total for Region	% of Total for Vocational Group	No. of Trucks and Tractors	% of Total for Region	% of Total for Vocational Group	No. of Trucks and Tractors	% of Total for Region	% of Total for Vocational Group	No. of Trucks and Tractors	% of Total for Region	% of Total for Vocational Group
A. Property Carrier Group, Private (other than For-Hire):															
Governmental Agencies	13,224	3.30	5.65	17,812	3.43	7.62	10,454	5.15	4.47	28,475	4.69	12.17	233,935	4.91	100.00
Agriculture	184,477	45.99	11.17	220,656	43.10	13.36	109,450	53.94	6.63	204,813	33.73	12.40	1,651,220	34.63	100.00
Extractive Industries	5,010	1.25	5.31	18,923	3.70	20.05	4,240	2.09	4.49	20,930	3.45	22.23	94,332	1.98	100.00
Construction Industries	32,506	8.10	7.45	39,417	7.70	9.03	14,160	6.98	3.25	68,297	11.24	15.65	433,315	9.15	100.00
Processing Industries	11,336	2.83	5.96	14,643	2.86	7.69	3,091	1.52	1.62	20,726	3.41	10.89	190,333	3.99	100.00
Wholesale Distribution	22,567	5.62	6.15	34,442	6.73	9.38	6,878	3.39	1.87	41,259	6.79	11.24	337,143	7.69	100.00
Consumer Distribution	41,298	10.29	6.09	52,179	10.19	7.70	15,357	7.57	2.26	65,295	10.75	9.63	678,035	14.22	100.00
Other Public Utilities	6,289	1.57	7.09	8,471	1.65	9.55	3,214	1.58	3.62	13,626	2.24	15.36	88,695	1.86	100.00
Business, Professional and Personal Services	7,731	1.93	5.92	9,971	1.95	7.64	3,517	1.73	2.70	21,052	3.47	16.13	130,523	2.73	100.00
Institutional Agencies	1,251	.31	5.93	1,500	.29	7.11	691	.34	3.27	3,438	.57	16.29	21,101	.43	100.00
Personal Transportation	10,330	2.57	6.78	20,444	3.99	13.43	9,854	4.86	6.47	52,339	8.63	34.40	152,286	3.20	100.00
Tank Trucks—All Private Uses[1]	8,660	2.16	9.53	9,779	1.91	10.76	2,799	1.39	3.08	8,763	1.43	9.64	90,907	1.92	100.00
Not Classified	.....	.....	.....	650	.13	32.53	82	.04	4.10	109	.02	5.46	1,993	.04	100.00
Total Private	344,679	85.91	8.33	443,887	87.68	10.85	183,787	90.57	4.43	549,222	90.42	13.28	4,136,923	86.75	100.00
For-Hire Carriers:															
Intercity Common Carriers	19,595	4.88	12.90	11,040	2.16	7.27	3,801	1.87	2.50	16,855	2.77	11.09	151,963	3.19	100.00
Local Common Carriers	11,653	2.90	9.84	6,715	1.31	5.67	2,053	1.01	1.73	11,240	1.85	9.49	118,434	2.43	100.00
All Contract Carriers	23,913	5.96	6.89	43,248	8.45	12.46	12,450	6.14	3.59	28,298	4.66	8.15	347,177	7.28	100.00
Tank Trucks—All For-Hire Uses[1]	1,416	.35	9.48	2,036	.40	13.63	837	.41	5.60	1,787	.30	11.97	14,934	.30	100.00
Total—For-Hire	56,587	14.09	8.95	63,039	12.32	9.97	19,141	9.43	3.03	58,180	9.58	9.20	632,508	13.25	100.00
TOTAL—Property Carrier Group	401,266	100.00	8.41	511,926	100.00	10.74	202,928	100.00	4.25	607,402	100.00	12.74	4,769,439	100.00	100.00

[1] Distribution of tank trucks between private and for-hire, estimated on basis of data as of about the end of 1943.

TRUCK PRODUCTION (U. S.) BY CAPACITIES, 1936-1945

	TOTAL All Weights			LIGHT Under 9000 lb. G.V.W.			MEDIUM 9,000 to 15,999 lb. G.V.W.			HEAVY 16,000 lb. and Over		
	Civilian	Military	Total	Civilian	Military	Total	Civilian	Military	Total	Civilian	Military	Total
1936	770,629	2,725	773,354	317,189	1,004	318,193	417,395	1,125	418,520	36,045	596	36,641
1937	872,118	1,703	873,821	396,326	368	396,694	437,525	1,266	438,791	38,267	69	38,336
1938	478,307	2,248	480,555	208,575	690	209,265	248,886	1,119	250,005	20,846	439	21,285
1939	685,298	6,188	691,484	306,098	1,651	307,749	343,190	2,900	346,090	36,008	1,637	37,645
1940	700,101	55,389	755,490	337,983	13,365	351,348	323,088	36,042	359,130	39,030	5,982	45,012
1941	823,205	218,657	1,041,862	367,467	72,164	439,631	408,367	128,170	536,537	47,371	18,323	65,694
1942	125,294	671,633	796,927	23,427	277,413	300,840	86,072	169,188	255,260	15,795	225,032	240,827
1943	2,888	672,614	675,502	0	268,438	268,438	179	154,808	154,987	2,709	249,368	252,077
1944	119,081	624,669	743,750	0	247,113	247,113	87,990	87,380	175,370	31,091	290,176	321,267
1945	313,643	354,935	668,578	72,197	132,574	204,771	183,948	24,232	208,180	57,498	198,129	255,627

Source—War Production Board, Automotive Division. These data cover actual production of trucks for civilian and military uses. They differ from the "factory sales" figures accepted as an index of production before the war. Jeeps, military ambulances and wheel drive personnel carriers are included; half-tracks, armored cars and integral buses are excluded.

REGIONAL DISTRIBUTION OF TRUCKS & TRUCK-TRACTORS BY RATED CAPACITY*

★ STATISTICAL STUDY OF TRUCK TRANSPORTATION

(As of August 31, 1944)

ODT Region	Less than 1½ Tons			1½ Tons			Over 1½ but less than 3½ Tons			3½ but less than 5 Tons		
	Number	% of Total of This Capacity	% of Total of This Region	Number	% of Total of This Capacity	% of Total of This Region	Number	% of Total of This Capacity	% of Total of This Region	Number	% of Total of This Capacity	% of Total of This Region
1	322.019	12.92	44.43	239.759	13.73	33.12	77.769	24.92	10.74	17.833	30.55	2.46
2	253.725	10.18	49.92	170.236	9.74	33.49	47.496	15.22	9.35	10.691	18.30	2.10
3	314.401	12.61	55.81	215.950	12.36	38.34	19.816	6.35	3.52	1.677	2.87	.30
4	215.190	8.63	48.12	180.650	10.34	40.40	33 476	10.73	7.48	3 301	5 66	.74
5	404.477	16.23	49 39	332.784	19.05	40.62	51.230	16.42	6.25	7.527	12.90	.92
6	216.899	8.78	54.40	159.856	9.15	39.73	14.990	4.80	3.73	1.590	2.71	.39
7	314.310	12.61	61.34	172.676	9.89	33.70	17.555	5.62	3.43	2 551	4.37	.50
8	115.087	4.62	56.59	76.417	4.37	37.58	7.044	2.26	3.46	1.539	2.72	.78
9	334.426	13.42	54.75	198.630	11.37	32.52	42.688	13.68	6.99	11.630	19.92	1.90
TOTAL	2,492,534	100.00	52.03	1,746,958	100.00	36.47	312,064	100.00	6.51	58,369	100.00	1.22

ODT Region	5 Tons and Over			Not Specified			TOTAL		
	Number	% of Total of This Capacity	% of Total of This Region	Number	% of Total of This Capacity	% of Total of This Region	Number	% of Total of This Capacity	% of Total of This Region
1	38.872	47.32	5.37	27.697	28.06	3.83	723.949	15.11	100.00
2	13.101	15.95	2.58	13.026	13.20	2.56	508.265	10.61	100.00
3	1,193	1.45	.21	10.262	10.40	1.82	563.299	11.76	100.00
4	4.608	5.61	1.03	9 972	10.10	2.23	447.197	9.33	100.00
5	7.919	9.64	.97	15.254	15.45	1.86	819.191	17.10	100.00
6	1.366	1.66	.34	5.680	5.75	1.41	402.371	8.40	100.00
7	2.108	2.57	.41	3.182	3.22	.62	512 392	10.70	100.00
8	1.333	1.62	.66	1.893	1.91	.93	203.353	4.24	100.00
9	11.646	14.18	1.91	11.756	11.91	1.93	610.776	12.75	100.00
TOTAL	82,146	100.00	1.71	98,712	100.00	2.06	4,790,783	100.00	100.00

* Includes rental trucks and service equipment operated by passenger carriers.

REGIONAL DISTRIBUTION OF BUSES AND TAXICABS BY VOCATIONAL GROUPS

(As of August 31, 1944)

Vocational Group	REGION I			REGION II			REGION III			REGION IV			REGION V		
	No. of Power Units	% of Total for Region	% of Total for Vocational Group	No. of Power Units	% of Total for Region	% of Total for Vocational Group	No. of Power Units	% of Total for Region	% of Total for Vocational Group	No. of Power Units	% of Total for Region	% of Total for Vocational Group	No. of Power Units	% of Total for Region	% of Total for Vocational Group
Passenger Carrier Group[1]															
Ambulances and Hearses	8.460	12.71	17.15	8.838	16.62	13.87	6.721	12.70	13.63	6.363	17.98	12.90	8.011	20.45	16.25
School Buses	6.678	10.03	7.88	7 599	18 44	8.95	20 885	39.47	24.63	10 3[illegible]4	29.34	12.25	12 755	32.56	15.05
Taxicabs	22.587	33.94	2[illegible] 69	12.963	31.50	16.47	12.519	23 66	15.90	5.738	16.21	7 29	8 337	21.28	10.59
Rental Cars and Trucks[2]	7.942	11.94	31.75	3 478	8.45	13.90	3 711	7 01	14.84	1.767	4.99	7.06	1 996	5.10	7.98
Local and Suburban Buses	18.870	28.35	31.79	8.244	20.03	13.89	5 654	10.68	9 52	7 326	20.70	12.34	5 533	14.12	9.32
Intercity Buses	2.020	3.03	9.29	2.040	4.96	9.38	3.429	6.48	15.76	3.818	10.79	17.55	2.543	6.49	11.69
TOTAL—Passenger Carrier Group	66,557	100.00	20.87	41,152	100.00	12.90	52,919	100.00	16.59	35,396	100.00	11.10	39,175	100.00	12.28

Vocational Group	REGION VI			REGION VII			REGION VIII			REGION IX			TOTAL		
Ambulances and Hearses	3,878	21.04	7.86	4.555	14.18	9.24	1,022	15.53	2.07	3.485	13.02	7.03	49 313	15.46	100.00
School Buses	4.750	25.78	5.60	12.895	40.15	15.21	2,580	39.20	3.04	6.268	23.55	7.39	84.784	26.59	100.00
Taxicabs	3.792	20.58	4.82	6.637	20.67	8.43	976	14.83	1.24	5.169	19.41	6.57	78.717	24.68	100.00
Rental Cars and Trucks[2]	965	5.24	3.86	751	2.34	3.00	619	9.40	2.48	3.786	14.22	15.13	25.015	7.84	100.00
Local and Suburban Buses	3.496	18.97	5.89	4.199	13.07	7.07	796	12.09	1.34	5.245	19.70	8.84	59.363	18.61	100.00
Intercity Buses	1,547	8.39	7.11	3.079	9.59	14.15	589	8.95	2.71	2.688	10.10	12.36	21,753	6.82	100.00
TOTAL—Passenger Carrier Group	18,428	100.00	5.78	32,116	100.00	10.07	6,582	100.00	2.06	26,620	100.00	8.35	318,945	100.00	100.00

[1]—Includes service trucks operated by the various passenger carrier groups.

[2]—Includes rental trucks which, for the country as a whole, number 16,966.

TRUCK PRODUCTION (U. S.) BY MONTHS, BY YEARS*

	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942†	1943†	1944†	1945†
January	18.992	42.912	62.174	66.250	70.109	53.823	60.703	69.382	89.645	93.181	49.612	58.827	67.394
February	15.319	43.482	58.655	63.331	67.405	47.151	60.220	66.276	91.109	77.269	47.546	55.916	64.510
March	17.803	59.160	66.503	78.052	90.242	47.580	72.243	70.698	97.638	89.537	55.979	56.695	75.057
April	26.677	64.620	65.778	86.243	96.170	43.032	63.966	70.607	87.293	64.157	56.173	56.071	67,579
May	33.760	56.691	55.560	75 591	91.487	37.101	59.672	65.539	101.072	61.064	55.190	57.287	71.267
June	42.130	45.197	62.158	77.631	85.898	38.139	63.034	59.596	101.542	73.732	56.516	61.479	66.456
July	38.092	41.839	57.765	68.809	78.568	[illegible]1.602	58.621	62.934	100.495	63.885	60.285	61.921	54.563
August	41.441	51.311	56.270	61.923	82.874	31.870	39.461	29.050	69.072	59.526	61.321	69.015	44.779
September	34.424	44.967	31.443	45.064	52.542	18.375	27.132	44.638	66.465	59.857	57.582	65.605	31.572
October	29.813	47.988	58.733	34.446	31.214	22.018	61.573	72.009	86.441	56.743	60.160	64.723	42.225
November	18.318	34.462	58.145	53.902	64.727	52.069	66.533	80.261	96.246	51.628	57.168	69.497	53.634
December	29,776	42.563	61,506	73.345	81.849	62,340	78,338	87,036	107,243	54,685	59,583	72,165	29,542
Total	346,545	575,192	694,690	784,587	893,085	488,100	710,496	777,026	1,094,261	805,264	677,115	749,201	668,578

* Bureau of Census data for 1933 through 1941 and representing factory sales. W.P.B. records for 1942 through 1945. † These data cover actual production of trucks for military and civilian use. Jeeps, military ambulances and all wheel-drive personnel carriers are included. To these have been added integral buses except for 1945, bus data for which were not available.

VITAL STATISTICS OF THE TRUCK INDUSTRY ★

NEW TRUCK REGISTRATIONS (U. S.), BY MONTHS, BY YEARS *

	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941††	1942§	1943§	1944§	1945§	
January	14.776	11.709	22.903	34.759	43.760	47.618	31.995	37.715	45.650	50.830	23,358	4,827	8,577	17,650	January
February	14.558	9.707	24.476	34.797	40.301	41.843	27.551	34.102	41.336	50.124	10,311	6,083	6,231	17,676	February
March	16.874	9.934	33.884	41.511	52.428	60.301	37.255	45.083	53.093	62,413	8,277	8,280	6,726	19,710	March
April	17.784	17.301	38.882	46 785	64.956	67.832	35.682	46,063	55.982	64.236	17,497	7,019	11,390	19,718	April
May	18.696	20.925	39.831	47.968	62.183	65.857	32.937	45.381	51.553	64.177	12,473	8,025	14,807	23,663	May
June	17.876	23.254	34.768	48.243	56.851	58.626	30.647	40.482	43.504	62.265	9,535	7,287	15,283	23,759	June
July	14 731	30.642	37.490	51.243	63.695	61.686	33.475	44.747	50.913	67,412	9,756	9,474	10,728	34,431	July
August	15 081	28 799	40.790	50.355	59.222	60.872	34.231	43.523	49.980	56.191	7,615	9,254	18.044	227,623	August
September	14.967	31.269	37.225	41.390	54.611	54.711	26.570	32.983	39.224	43.892	8,956	9,454	12,386	‡	September
October	15.156	28.058	40.878	37.439	41.220	40.246	19.589	37.923	48.356	41,352	8,336	6,473	12,602	‡	October
November	10.392	18.691	28.689	36.935	30.255	27.248	23.943	41.286	46.618	36.799	4,854	5,007	12,981	‡	November
December	9.522	15.580	24,070	39.258	42.162	31.409	31,474	37,460	51,095	41,006	4,744	2,094	16,730	‡	December
Total	180.413	245.869	403.886	510.683	611.644	618.249	363.349	486,749	576,327†	640.697	125,710§	81,077§	146,465§	392,233§	Total

† Contains 23 delinquent registrations which cannot be assigned to any one month. †† Does not include Federal Government deliveries which are included in other years. * Source:—R. L. Polk & Co. § R. L. Polk & Co. new registrations for first three months of 1942. Remainder of 1942 and entire years of 1943, 1944 and 1945 are Commercial Trucks Rationed on Government Exemption Permits and Certificates of Transfer by W.P.B. and O.D.T. It is assumed that all certificates were cashed. ‡ Certificates no longer issued and therefore no record of permits or sales.

TOTAL TRUCK REGISTRATIONS BY STATES

	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945
Alabama	31.575	29.838	34.101	38.999	44.272	53 070	50.780	54.947	58.707	65.909	66.026	65.606	67,723	72,141
Arizona	14.687	14.569	16.791	17.964	20.183	22.973	22.998	24.083	25.243	26.689	28.093	27,020	27.211	29,000
Arkansas	22.989	32.980	35.700	40.107	50.131	59.263	53.789	60.535	66.158	77.191	75.267	71,916	74,459	78,902
California	234.177	220.087	237.566	253.908	*†266.379	*†284.132	*†300.483	*†309.855	*†326.998	*†350.261	*†344.566	*†327,204	327,375	355,282
Colorado	30.357	27,433	27,858	28,430	*31,930	32,795	31,447	30,636	30,298	31,044	31,784	†68,887	70,524	76,837
Connecticut	51.388	52.564	55.878	62.232	60.653	68.070	63.910	66.273	74.456	79.256	54.918	61,423	60,898	58,861
Delaware	*8.666	*8.485	*9.394	*9.692	*10.010	*10.314	*10.519	*11.248	*11.030	*13.969	*13.416	*13,578	*11,371	13,162
District of Col.	18.286	16.742	17.263	17.610	19.397	18.862	14,267	13.718	13.928	13.809	14.646	15,037	13,562	13,879
Florida	37.955	45.019	55.359	57.199	65.738	70.308	71,871	76.320	79.790	87.706	80.919	84,132	88,053	96,384
Georgia	42.050	51,212	60,262	66,079	73.269	78,803	76,154	85,520	91,321	99,506	96,655	93,817	97,553	104,650
Idaho	14.030	14,884	17,861	21,371	25.852	28.208	27.809	31,380	33.538	36.515	34.807	35,724	‡35,533	38,352
Illinois	177.820	*186.186	*174.235	*185.477	*203.926	*220.639	*222.592	*232.888	*228.889	*234.703	*233.386	*221,634	215,930	221,929
Indiana	122.019	116.361	122.791	132.767	131.767	140.292	122.168	129.695	134.215	135.834	139.648	124,195	137,252	137,809
Iowa	74.882	69.490	75.350	80.529	82.840	86.636	*92.884	*93.139	*101.244	*108.985	*103.487	*103,509	98,373	102,176
Kansas	*71.778	*72,404	75,565	*80.068	*87,113	*93.046	*97,744	*98,616	102.665	113,872	119,725	119,168	121,819	123,353
Kentucky	31.621	32.111	37.445	43.613	51.840	59.341	63.373	69.629	75.891	81,663	77,412	73,107	76,603	80,000
Louisiana	41.853	42.007	44.779	59.398	76.251	80.630	80.167	84.475	81.793	93.305	73.638	70,691	72,015	78,256
Maine	36.203	35.271	37.693	38.079	39.276	43.171	42.663	41,673	43.914	45.748	42.074	41,959	44,527	49,891
Maryland	41.529	34.728	45.351	48.528	53.398	52.014	53.926	58.027	59.160	60.876	60.627	61,672	53,319	65,090
Massachusetts	102.959	99.854	98.508	100.411	102,400	104.316	104,134	108,624	109,462	110,650	109,783	104,253	▲103,606	▲111,417
Michigan	*123.273	*121.639	*123.405	*127.283	*139.520	*146.117	*139,630	*147.360	*152.735	*163.264	*151,053	*158,656	159,174	167,214
Minnesota	101.650	99.130	103.882	105.861	114.448	117.632	115.970	118.227	124.602	129.710	123.213	116,026	113,696	115,906
Mississippi	*26.164	32.924	34.115	33.306	43.357	53.072	51.436	57.097	60.927	64.119	61.744	60,900	65,780	68,988
Missouri	*29.265	*103.795	107.709	115.819	*128.425	*134.457	*133,686	*141,609	*152.924	*164.546	*158.342	148,608	143,867	154,282
Montana	*20.521	*27,480	*31,067	*35,542	*39,311	*40,081	*41,138	*44,480	*47.984	*51,476	*46,695	*45,380	46,730	48,280
Nebraska	82.294	53.947	58.560	59.054	62.133	63.667	66.988	65.632	68.016	71,233	70.323	71,726	72,544	75,554
Nevada	6.527	5.927	6.391	6.875	*7.680	*8.092	*7.525	5.811	6.571	9.524	10.037	9,850	9,520	9,193
New Hampshire	17.378	19.872	22.382	23.455	*22.023	23.768	*23.597	*24.964	30.062	32,118	32.589	*27,195	27,210	23,483
New Jersey	128.604	122.228	123.351	124.866	130.642	134.458	132.714	132.819	137.126	141.329	140.928	135,529	139,937	149,000
New Mexico	15.020	15.290	16,112	18,245	22,731	31,117	26,915	28,488	30,090	30,806	28,559	28,845	27,823	29,640
New York	313.765	298.506	298.379	306.919	328.404	333.543	327.474	350.693	363.110	348.819	330.323	310,258	232,091	234,321
North Carolina	50.262	49.660	54.766	57.931	65.000	73.383	74.211	81.068	87.457	96.320	93.922	95,600	93,063	97,500
North Dakota	23.590	*25.342	26.315	28.780	29.650	32.084	33.061	34.544	37.019	40.738	41.935	44,397	46,946	49,232
Ohio	167.492	*158.189	*159.845	*170.954	*172.273	*180.494	*177.314	*184.223	*190.654	*192.000	*193.325	185,596	111,484	196,810
Oklahoma	44.884	65.957	73.928	82.855	90.638	98,675	92,943	98,172	103.391	107,903	109,536	101,989	102,383	105,000
Oregon	34.477	32.208	41.411	42.594	49.748	60.660	59.829	62.749	67.756	75.533	75.217	74,724	77,773	82,408
Pennsylvania	216.334	219.497	215.016	229.026	249.637	257.330	258.654	269.062	263.112	274.967	274.745	275,052	276,072	295,340
Rhode Island	18.416	17.965	18.332	18.428	19.458	19.788	20,010	19.699	20.743	21,174	21,876	20,575	21,995	22,607
South Carolina	19.722	17.795	20.877	29.761	33.525	39.635	41.379	44.142	39.070	50.638	48.311	49 257	45,701	48,047
South Dakota	19.542	22,784	23,832	26,931	28,172	28,768	28,494	30,282	32.298	34,952	34,856	35,028	35,590	37,149
Tennessee	31.434	33.848	37.755	42.031	49.368	55.736	61.724	67.053	70.667	81,022	74.285	71,701	73,650	77,134
Texas	191.462	188.676	226.276	257.055	285.839	294.639	316.757	335.487	350.203	369.663	297.526	287,223	293,689	307,455
Utah	16.096	16.348	17.103	17.537	22.000	21.094	22.432	25.209	23.534	24.209	24.905	25,549	23,836	23,748
Vermont	8.309	7,924	8,612	9.031	8,682	9.029	9.042	9.576	9.628	10.327	9.858	10,207	10,806	11,467
Virginia	62.344	57,286	57,268	60,376	57,689	67,547	66,410	68,723	74,720	83,594	83,048	80,978	82,912	94,286
Washington	63.826	62.548	64.321	68.657	79.500	84.577	83.204	85.494	93.395	94.772	93.517	94,042	96,158	103,762
West Virginia	32.916	33.415	27.253	29.305	36.908	44.558	43.785	48.239	51.520	49.541	49.321	47,124	51,381	55,512
Wisconsin	108.047	104.347	120.180	130.144	150.779	145.822	135.413	141.590	147.661	153.037	143.087	135,643	139,186	142,210
Wyoming	9.879	10.643	13.102	14.593	15.592	17.368	17.589	18.090	19.062	20,474	20,192	20,014	20,472	21,438
TOTALS	3,229.315	3,227.357	3,409,335	3,655,705	3,981,755	4,107,244	$4,210,022	$4,419,893	$4,604,772	$4,859,653	$4,644,210	$4,549,882	4,518,157	4,817,015

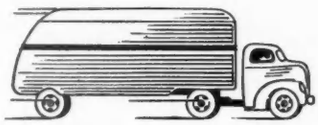
* Includes buses. § Revised. † Large increase due to reclassification of trucks previously carried as passenger cars. ‡ Includes light commercial vehicles registered as passenger cars. ▲ Includes trailers and semi-trailers.

TOTAL U. S. TRUCK REGISTRATIONS, BY YEARS (1904-1945)

		% Gain			% Gain			% Gain			% Gain			% Gain
1904	410	...	1912	41,400	107	1920	1,006,082	27	1928	3,113,999	7	1937	4,107,244	3.1
1905	600	46	1913	63.800	54	1921	1,117,100	11	1929	3.379,854	8	1938	4,210,022	2.5
1906	1,100	83	1914	85.600	34	1922	1,375.725	23	1930	3.486.019	3	1939	4,419.893	5.0
1907	1,700	55	1915	136.000	59	1923	1,612.569	17	1931	3.486.571	—.6	1940	4,604.772	4.2
1908	3,100	82	1916	215.000	58	1924	2,134,724	32	1932	3.229.315	—.7	1941	4,859.653	5.5
1909	6.050	95	1917	326,000	52	1925	2,440.854	14	1933	3.227.357	—0.6	1942	4,644.210	—4.4
1910	10.000	65	1918	525.000	61	1926	2,764.222	13	1934	3.409.335	5.5	1943	4,549.882	—2.0
1911	20,000	100	1919	794,372	51	1927	2,914,019	5	1935	3.655.705	7.1	1944	4,518,157	—0.7
									1936	3,981,755	9.1	1945	4,817,015	+5.6

Exides

FOR LOWER OPERATING COSTS



On thousands upon thousands of trucks, in every type of service, Exides provide daily proof of their greater economy, finer performance, longer life. Both owners and operators have found that Exides cost less per mile of operation, require a minimum of maintenance, and give added months of service.

The extra long-life and greater dependability of Exides are due to Exide engineering and manufacturing skill . . . a result of many years experience in the development of batteries for specific needs. When you buy an Exide, you buy to last . . . and you buy to save.

Exide
EXTRA DUTY BATTERIES

THE ELECTRIC STORAGE BATTERY COMPANY, Philadelphia 32 • Exide Batteries of Canada, Limited, Toronto

VITAL STATISTICS OF THE TRUCK INDUSTRY ★

NEW TRUCK REGISTRATIONS BY MAKES, BY YEARS*

	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941††	1942‡
Autocar	1,748	1,015	1,127	1,139	1,001	1,451	2,181	1,617	2,044	1,955	2,510	319
Brockway	1,685‡	752	875	1,213	1,245	1,695	1,593	1,303	1,815	1,672	2,294	171
Chevrolet	99,600	60,784	99,880	157,507	167,129	204,344	183,674	119,479	169,457	194,038	212,797	11,250
Diamond T	2,493	2,250	4,139	5,440	6,454	8,750	8,118	4,393	5,412	6,359	6,077	530
Divco	.....	.....	200	254	398	964	1,125	1,229	1,491	1,662	2,306	180
Dodge	13,518	8,744	28,034	43,252	61,438	85,295	64,098	33,656	48,049	54,615	62,925	4,736
Federal	1,523	1,167	1,360	1,962	2,190	2,930	2,339	1,370	1,837	1,617	1,611	175
Ford	138,854	66,937	62,397	128,250	185,848	177,244	189,376	100,959	128,889	162,333	174,024	11,050
F. W. D.	.....	.....	71	156	212	369	435	274	182	252	280	75
G. M. C.	6,919	6,359	6,602	10,449	11,442	26,980	43,522	20,152	34,908	42,436	45,703	3,429
Hudson	.....	.....	.....	.....	638	1,905	4,823	719	409	761	736	33
Indiana	.....	957	1,252	729	862	1,705	1,371	435	178	.....	.....	.....
International	21,073	15,752	26,658	31,555	53,471	71,958	76,174	55,836	66,048	77,891	92,492	7,316
Mack	2,945	1,425	1,652	1,830	1,515	4,226	5,513	4,406	6,670	7,754	9,498	767
Plymouth	.....	.....	.....	.....	660	2,420	13,709	6,652	8,294	9,573	7,732	137
Reo	5,166	3,187	3,042	5,035	5,101	4,227	4,254	2,929	853	625	1,543	156
Sterling	739	227	108	134	174	277	311	267	326	341	400	37
Stewart	1,394	867	684	736	880	1,280	1,143	390	70	.....	.....	.....
Studebaker	3,495	2,430	1,872	1,697	2,100	3,279	5,129	2,000	2,110	1,207	5,078	394
White	2,561	2,138	1,384	3,963	3,304	5,757	5,933	3,514	4,558	7,344	9,271	933
Willys	3,131	1,132	233	25	2,280	2,441	1,122	1,889	1,634	2,291	2,031	98
All Others	7,050	4,290	4,299	3,560	2,291	2,147	2,301	1,880	1,524	1,552	1,429	158
Total	313,884	180,413	245,869	403,836	510,633	611,644	618,249	365,349	486,748	576,327	640,697	41,944‡

‡ Includes Indiana. * Data from R. L. Polk & Co. †† Does not include Federal Government registrations which are included in previous years. ‡ First three months only. Does not include Connecticut for month of March.

15,431,475 TRUCKS MANUFACTURED IN 42 YEARS

(U. S. Truck Production & Wholesale Value)

Year	Units	Wholesale Value
1904	700	$ 1,272,747
1905	750	1,330,000
1906	800	1,440,000
1907	1,000	1,780,000
1908	1,500	2,550,000
1909	3,297	5,333,683
1910	6,000	9,660,000
1911	10,681	21,000,000
1912	22,000	43,000,000
1913	23,500	44,000,000
1914	24,900	44,219,098
1915	74,000	125,800,000
1916	92,130	161,000,000
1917	128,157	220,982,668
1918	227,250	434,168,992
1919	224,731	371,422,820
1920	321,789	423,249,410
1921	148,052	$166,070,810
1922	269,991	226,049,658
1923	409,295	308,537,929
1924	416,659	318,580,580
1925	530,659	458,400,277
1926	316,947	452,123,435
1927	464,793	420,130,624
1928	543,342	437,132,258
1929	771,020	566,029,844
1930	571,241	389,436,690
1931	416,648	262,417,542
1932	235,187	136,193,336
1933	346,545	186,069,314
1934	575,192	320,143,667
1935	694,690	379,407,751
1936	784,587	462,820,474
1937	893,085	542,921,096
1938	488,100	$339,226,639
1939	710,496	502,421,776
1940†	777,026	‡ 577,194,000
1941†	1,094,251	‡1,034,569,000
1942†	805,284	‡1,351,588,000
1943†	677,115	‡1,336,818,000
1944†	749,201	‡1,486,804,000
1945†	††668,578	‡1,021,317,500
42 Years	15,431,475	$14,573,295,916

* Bureau of Census data up to 1942, reporting factory sales.

† 1942-1945 Automotive Division, W.P.B., reporting production.

†† Does not include integral buses which are included in other years.

‡ Partly estimated.

COST PER VEHICLE MILE OF MAJOR ELEMENTS OF "OPERATION & MAINTENANCE EXPENSE" OF CLASS I MOTOR CARRIERS ENGAGED PREDOMINANTLY IN INTERCITY SERVICE, 1940-43(1)

(All amounts in cents per vehicle mile)

Item	Property Carriers (Common-general Commodities)				Passenger Carriers			
	1940	1941	1942	1943	1940	1941	1942	1943
Equipment maintenance and garage expense (2)	3.28	3.64	4.32	6.25	3.73	3.89	4.32	5.38
Repairs to revenue equipment (2)	1.76	1.92	2.46	3.65	1.94	2.07	2.32	3.09
Servicing of revenue equipment (2)	.23	.25	.34	.38	.40	.41	.48	.60
Tires and tubes (2)	1.02	1.19	1.19	1.76	.88	.86	.87	.89
Transportation expense (2)	7.55	7.68	8.48	9.08	6.31	6.49	7.16	8.52
Drivers and helpers wages and bonuses (2)	4.57	4.63	5.25	5.79	3.70	3.83	4.24	5.21
Fuel for revenue equipment (2)	1.70	1.75	1.97	2.09	1.48	1.47	1.53	1.61
Terminal expense (station expense)	5.08	7.06	7.55	8.69	2.00	2.18	2.73	3.19
Sales, tariff and advertising expense	1.05	1.17	1.11	1.10	.94	.87	.78	.77
Insurance and Safety Expense	1.38	1.48	1.67	2.07	1.04	.99	1.07	1.19
Administration and general expense	2.57	2.98	3.23	3.68	1.54	1.69	2.00	2.10
Total "Operation and Maintenance Expense"	20.24	23.47	25.42	30.20	15.02	15.99	17.92	20.15
Total—all expenses (Including Depreciation and operating taxes and rents)	24.37	27.82	30.35	35.36	20.29	21.25	23.41	25.69

(1)—Data from ICC "Statistics of Class 1 Motor Carriers" compiled from annual reports of Class 1 motor carriers. Data for property carriers shown above are confined to predominantly intercity carriers of general commodities.

(2)—Based on miles operated by owned vehicles (in 1941 and 1942 bus statistics, leased miles were not separable.

SAVES YOU MONEY EVERY TRIP !

The Coupe Express
One-ton Pick-up

Studebaker's economical one-ton pick-up truck

ALMOST from the first day you buy it, you know for certain that this one-ton Studebaker pick-up truck is a marvel at money saving.

You don't have to keep records with split-penny accuracy to discover this. You're quickly aware that you're spending less money for gas than a truck of this power and load capacity ever cost you before.

It's powered by Studebaker's brilliant Econ-o-miser engine used in the famous Studebaker Weasel personnel and cargo carrier during the war. Its sound, solid Studebaker construction keeps this big-capacity truck free from the need for costly repairs.

Engineered and built to save!

Regardless of size, all Studebaker trucks operate with exceptional economy, because Studebaker has successfully solved the problem of designing a truck so that it gets the maximum mileage out of every gallon of gasoline and every set of tires.

High quality materials and fine father-and-son craftsmanship still further increase every Studebaker truck's value as an investment in low-cost transportation.

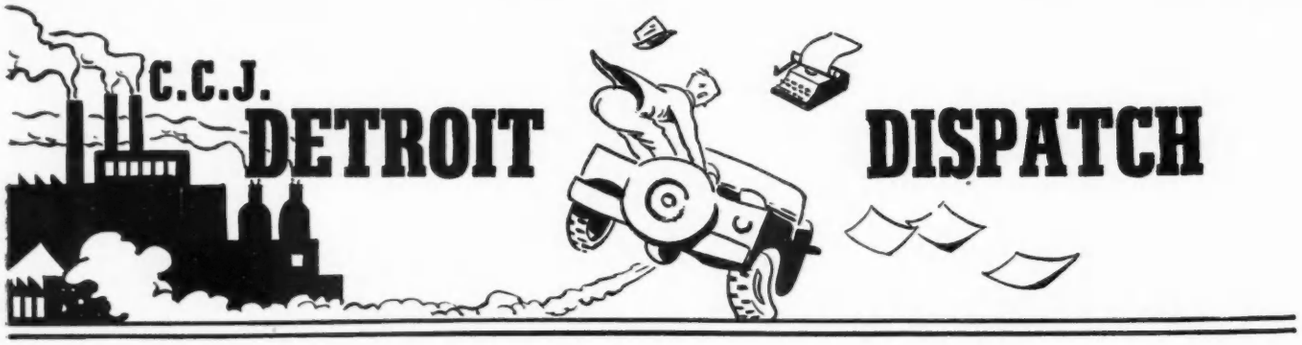
Demand is greater than supply right now. But the time is coming when everyone who wants a Studebaker truck can get one.

See your nearby Studebaker dealer—and remember, these trucks have the quality and stamina that won high acclaim for over 200,000 Studebaker military transport vehicles in tough service all over the world.

Studebaker

South Bend 27, Indiana

PIONEER AND PACEMAKER IN AUTOMOTIVE PROGRESS



One Output Kink Out . . . Inventory Helps GM . . . Sheet Steel Bottleneck . . . Truck Production Climbs . . . GM Parts Drive On . . . Price Rollback Doubted . . . Profits in Peril . . . 40-Hr. Worry . . . Tire Bright Spot

by Leonard Westrate
CCJ Detroit News Editor

One Output Kink Out

With the recent lifting of most original equipment truck parts ceilings, the production outlook for trucks has brightened a little. Manufacturers here say that the move was long delayed, but now that it is a fact, at least one ball and chain on production has been cut adrift. However, these ceilings were only one in a regular Pandora's box of troubles, and there still are a few kinks to unravel from the production line before really heavy production comes in the industry as a whole.

Inventory Helps GM

Some companies, such as Chevrolet and GMC, are in a much better condition that others which have been operating more or less on a continuous basis. The reason for this is that General Motors accumulated a tremendous inventory of material and parts during the strike and warehoused them either on freight cars at a heavy demurrage charge or in various storage places near the plants. One warehouse in Detroit is packed to the rafters with such parts. The only deterring factor for both Chevrolet and GMC will be the speed with which the GM parts divisions can produce the components needed for GM's own truck operations.

Sheet Steel Bottleneck

Steel now is emerging as a major bottleneck in the way of the unprecedented production planned for the coming year. Sheet steel is particularly tight and may hold back peak production this year. Here, again, Chevrolet and GMC are in a favored position, because they have been accumulating large stocks, whereas Ford, Dodge, Federal and others have been using up their shipments almost as fast as received. No one in Detroit is quite sure just what the trouble is in the steel supply, but they are certain that it does not look good at the moment, and a coal strike would be ruinous to steel capacity.

Truck Production Climbs

Truck production in February hit about 29,000 units, according to industry figures, and output for March probably will show about 39,000 to 40,000. This month, however, the rate is expected to climb substantially with Chevrolet and GMC again back in the running. Chevrolet production schedules for the months ahead are substantially higher than for any period in the company's history. However, shortages could conceivably develop in some lines after the initial backlog of parts is used up and slow down output. In general, truck manufacturers are more hopeful, but not optimistic.

GM Parts Drive On

Replacement parts for GM truck lines undoubtedly will be out of the famine category in a few weeks. Repair parts have shrunk to a dangerously low point from the standpoint of the truck operator. One fleet owner reports that he has one of the GM trucks down since last December for lack of a certain key part. In general, it has been a few critical parts that have been in the lowest supply, and a GM spokesman says a concerted drive will be made to refill the pipelines to dealers as fast as possible.

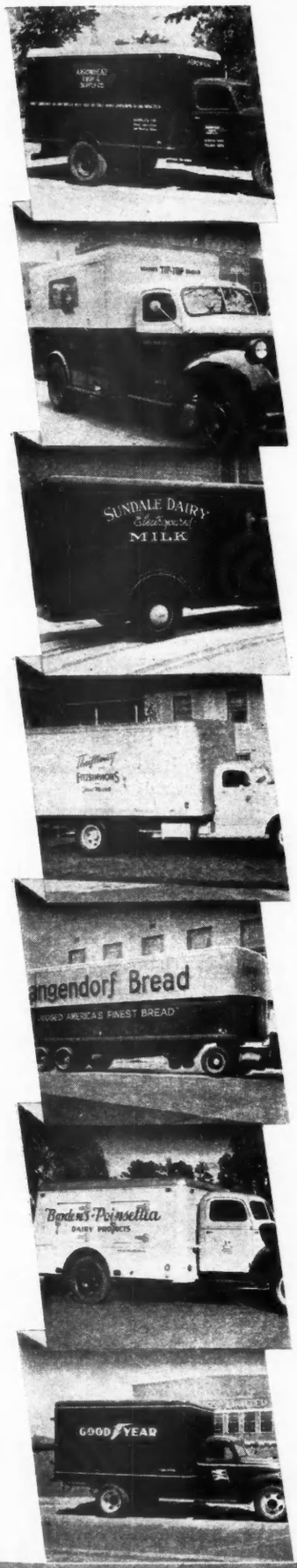
Price Rollback Doubted

Confusion still abounds in the realm of ultimate truck prices. For months, OPA has been talking about a price rollback from the levels prevailing when increases were allowed to compensate for low volume production. The pricing order has been delayed repeatedly, and it now is the opinion that a decision will not be made until all the increased costs resulting from recent boosts in pages and cost of materials are filed by the manufacturers. The general consensus now, although only a guess, is that the new price order will not constitute a rollback, but may actually be an increase. In any event, observers say, the ceilings may not mean much after production gets rolling because the forces of competition will drag anchor.

Profits in Peril

Truck operators in and around Detroit report that with labor and

(TURN TO PAGE 238; PLEASE)



See Ls Jim* for personal service on your new

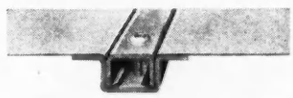
TRUCK BODY

"Ls Jim" is your neighbor—the Lindsay Structure body builder; he represents a new idea in truck and trailer body manufacture. He offers the combined advantages of personal service and mass production.

Jim knows local conditions. He styles your bodies to meet your special requirements. He makes quick deliveries and does a factory job of repairs to increase your trucks' "pay-service-hours."

You profit through the added advantages of Ls mass production—efficient nation-wide service. Owners of national fleets can have Ls bodies built and repaired by any of the 167 builders throughout the United States.

Lindsay Structure bodies, assembled from die-formed panels in steel or aluminum, offer a unique high strength-weight ratio—greater pay loads. Ask your nearest Ls builder or write to **The Lindsay Corporation, Adams-Franklin Bldg., Chicago 6, Ill.; 60 E. 42nd St., New York 17, N.Y.; or Lindsay Structure (Canada) Ltd., Dominion Square Bldg., Montreal.**



Lindsay Structure, with its "pre-tensed sheets," achieves extraordinary strength and lightness.

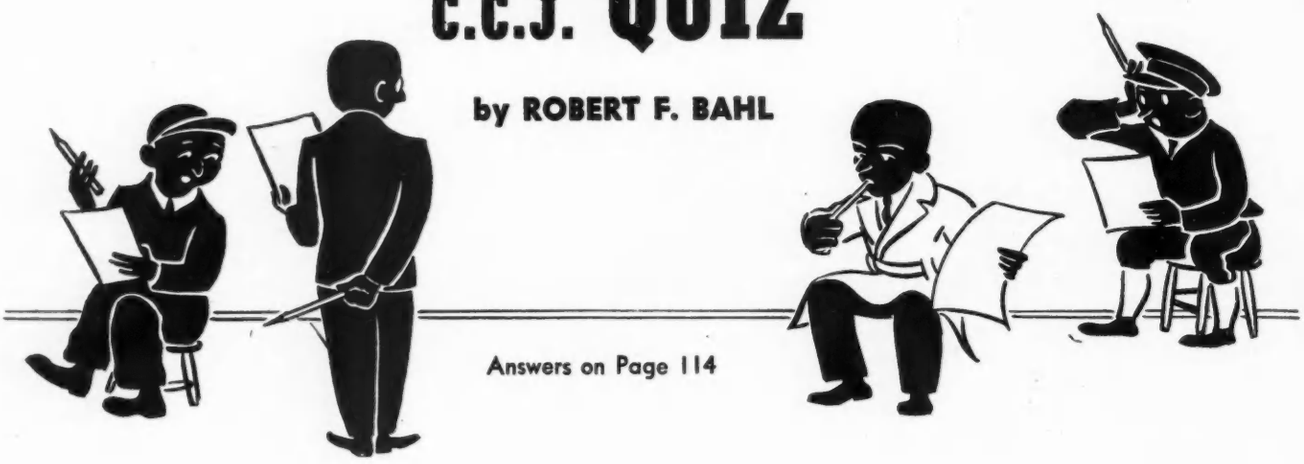
LINDSAY Ls STRUCTURE

U. S. Patents 2017629, 2263510, 2263511
U. S. and Foreign Patents and Patents Pending

THE MODERN METHOD OF LIGHT METAL CONSTRUCTION

C.C.J. QUIZ

by ROBERT F. BAHL



Answers on Page 114

Do you understand English? We hope you do, because this month's quiz concerns itself with words and phrases that are familiar to every Englishman, but they might keep you guessing. Each question is worth 10 points. You can check the answers on page 114. A score of 70 is pip-pip; 80 is a toodle-oo; 90 is a hear-hear and 100 is a Johnny Bull's eye.

1.

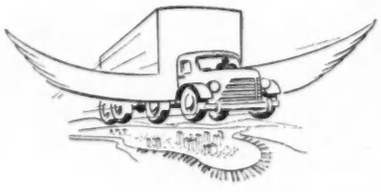
The British will have no "truck" with trucks. They call them all . . .

a. drays
b. lorries
c. wagons
d. trams

2

Would you consider an English driver intemperate if you saw him stepping out of a "saloon"?

a. Yes
b. No



3

Did you know that trucks have "wings"? At least they do in England. They are the . . .

a. doors
b. front fenders
c. headlamps
d. flat tires

4

The English driver probably wouldn't know what a "windshield" was, because he's accustomed to calling it a . . .

a. windscreen
b. pane
c. glass guard
d. breaker

5

When a Cockney truck-driver "lifts his bonnet," he isn't being courteous. He's just . . .

a. raising the hood
b. inflating the tires
c. raising the end-gate
d. taking off the radiator cap

6

The British have their slang just as we do. One of their expressions is "crash a bobby's arm." It means . . .

a. exceeding the speed limit
b. running through a stop signal
c. delivering damaged merchandise
d. having a wreck

7

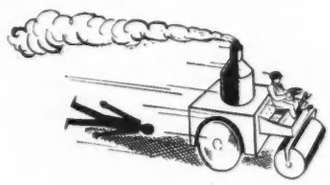
Another expression is to "top up." You go to the top of the class if you can tell us what it means.

a. Drive at full speed
b. Load the truck
c. Ascend a hill
d. Fill the battery with water

8

Still another term is "rev up." Can you give us an inkling of what that would be?

a. Crank a truck
b. Jack up a wheel
c. Step on the gas
d. Go in reverse



9

Don't fall flat on this one. To an Englishman, "flat out" means . . .

a. Come to a stop
b. Go at top speed
c. Have a puncture
d. Have a breakdown

10

An American made truck with a gas tank of 30 gal. capacity would hold how many gallons of "petrol" in England?

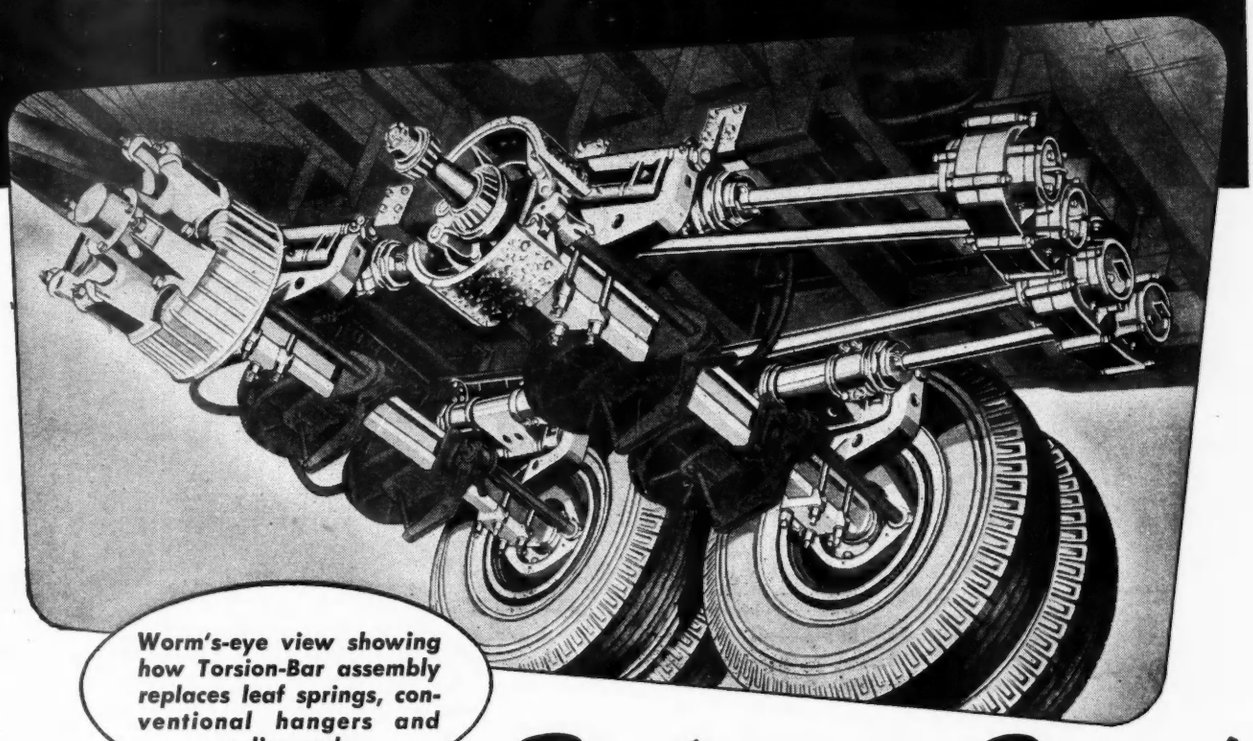
a. 25
b. 30
c. 35
d. 60

C.C.J. QUIZ Score Card

1.....	☐	6.....	☐
2.....	☐	7.....	☐
3.....	☐	8.....	☐
4.....	☐	9.....	☐
5.....	☐	10.....	☐

Total Score _____

THE NEW FRUEHAUF
GRAVITY SUSPENSION TANDEM



Worm's-eye view showing how Torsion-Bar assembly replaces leaf springs, conventional hangers and radius rods.

Revolutionary Design!

Road-Tested 2 Years Under All Conditions—Amazing Savings In Maintenance and Tire Cost!

● **PERFECT SPRINGING**—"feather soft" when light—with spring action exactly proportional to the load—**leaf-springs eliminated entirely.**

● **BRAKING SMOOTH AND SURE**—no chatter—no wheel hop—Torsion Bar Springs don't know the brakes are applied.

● **GREATER STABILITY AND SAFETY**—on the Fruehauf Gravity Suspension Tandem the Trailer actually hugs the road on turns. Also, axles ride road contours and bumps—independently of one another—to provide a "sure-footedness" unmatched in any other Trailer. Increases load stability!

● **LONGER TIRE LIFE**—you forget about destructive tire scuffing. Axles "follow the curves" automatically in all normal in-and-out, on-the-highway travel.

● **LOWER MAINTENANCE**—all bearings are lubricated for life. Radius rods, leaf springs, conventional hangers have all been discarded in this revolutionary design.

For complete facts about the performance and construction of this new Tandem, just ask at your nearest Fruehauf Branch for the "Tandem Booklet". Or, if you prefer, a penny postcard will bring this informative "working model" by return mail.

Fruehauf Trailers

A TRUCK IS LIKE A HORSE — IT CAN PULL MORE THAN IT CAN CARRY

World's Largest Builders of Truck-Trailers

FRUEHAUF TRAILER CO., Detroit 32

8 Factories—60 Factory Service Branches

"Engineered Transportation"

LAUGH IT OFF

with SKAG SHANNON

Traffic Judge: "What's this man charged with, officer?"

Cop: "Careless walkin', yer honor. He bumped into a truck and bent both fenders and radiator."

Judge: "That will be $10 fine for damaging the truck and 60 days in jail for causing this driver to lose his National Safety No-Accident Award."

C C J

Jailor to prisoner awaiting execution: "You have an hour of grace."

Prisoner: "OK. Bring her in."

C C J

She: "Will you think of me always, darling?"

He: "I can't lie to you. Occasionally I might wonder who will win the pennant this year."

C C J

It was Sunday morning. The transport driver slipped on his wife's robe and went downstairs to answer the doorbell. As he opened the door, the ice man kissed him. After giving due thought to this strange occurrence, he came to the conclusion that the ice man's wife must have a similar robe.

C C J

Three salesmen's opinions:

"I sell whiskey but I hate to see a woman drink alone."

"I sell groceries but I hate to see a woman eat alone."

"I sell mattresses!"

C C J

"So your brother is a painter, eh?"

"Yep."

"Paints houses, I reckon?"

"Nope, paints men and women."

"Oh, an artist."

"Nope, just paints 'men' on one door and 'women' on the other."

Our Fireman says, "If you don't succeed, try, try again. Then stop. No use being silly about it."

C C J

Pop Jones, our down-the-road driver, crashed into a telephone pole. Wire, pole and everything came down round his ears. They found him unconscious in the wreckage but, as they were untangling him, he reached out feebly, fingered the wires and murmured: "Thank heaven I lived a clean life. They've given me a harp."

C C J

And that reminds us of the politician who was asked his convictions on heaven and hell. He replied that he didn't want to express himself because he had good friends in both places.

C C J

Beulah, the Billing Clerk, defines "mandate" as an appointment with the boy friend.

C C J

"Have you got anything with a floor?"

Two Negro freight handlers who had not seen each other in five years discovered each had been married during this time:

Rastus: "What kinda woman did you-all get, Mose?"

Mose: "She's an angel, Rastus, dat's what she is."

Rastus: "Boy, you sho is lucky. Mine's still livin'."

C C J

Husband: "Who was that you were talking with outside for a whole hour?"

Wife: "Oh, that was Mrs. Jones. She didn't have time to come in."

C C J

She: "When a girl sneezes it is a sign that she is catching cold."

He: "When she yawns it is a sign that she has gotten cold."

C C J

Aggravated by the repeated tardiness of some of the mechanics on his early morning shift, the shop foreman posted the following bulletin:

"Hereafter, all employees on this shift will fall in for roll call promptly at 6 a.m. There will be no exemptions. Cooperation is necessary. Every man will have his wages docked 50 cents for each 10 minutes he is late. If you men will play ball with me, I'll play ball with you."

A short time after the notice was put up, some waggish grease monkey added this postscript:

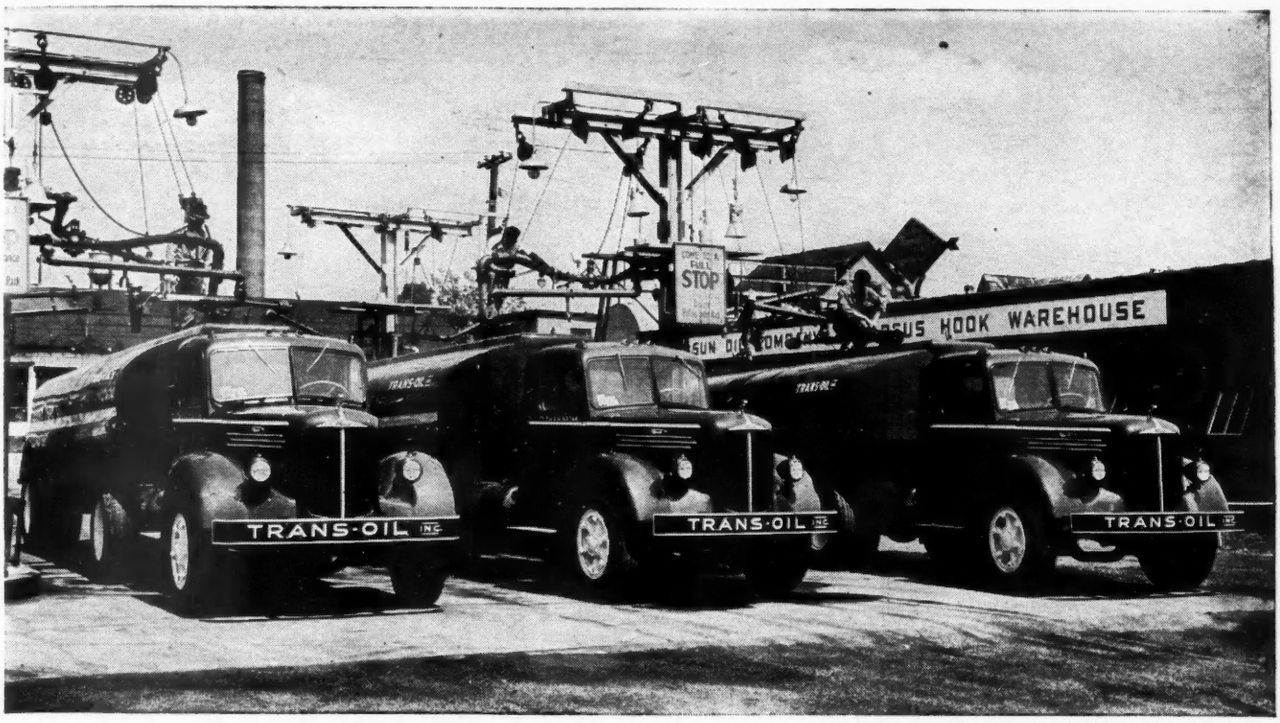
"We'd like to cooperate, boss, but 6 o'clock in the morning is a hell of a time to play ball."

C C J

Boss: "You are positively the laziest boy I know. Isn't there anything you are quick at?"

Office Boy: "I get tired awful fast."

(TURN TO PAGE 201, PLEASE)



Pipeline on Wheels

Two hundred and eighty million gallons . . . That's a lot of gasoline and oil to move in one year, with a fleet of 108 trucks.

E. Brooke Matlack of Philadelphia, specialist in petroleum products transportation, rolled up that record last year.

His trucks traveled 7,000,000 miles, on a round-the-clock, 7-day-a-week schedule.

And the majority of those trucks —68 out of 108—are Macks.

"We have always had excellent results with our Macks, both large and small," writes Mr. Matlack. "Low maintenance cost per mile, and their ability to keep going, have helped us greatly in our part in the war effort."

Macks can help you, too—help you haul more goods more miles at lower costs. You can't beat a Mack for performance.

Mack Trucks, Inc., Empire State Building, New York 1, N. Y. Factories at Allentown, Pa.; Plainfield, N. J.; New Brunswick, N. J.; Long Island City, N. Y. Factory branches and dealers in all principal cities for service and parts.

Mack
TRUCKS
FOR EVERY PURPOSE

Performance Counts!

WASHINGTON RUNAROUND

Truck Outlook Uncertain . . . May Not Reach Million . . . Replacement Parts Bug . . . Truck Pricing Order by Apr. 15 . . . OPA Studies Trailer Prices . . . Safety Rules Rewrite . . . Overseas Surplus Switch, Etc.

by GENE HARDY
CCJ Washington Bureau

Truck Outlook Uncertain

As official Washington views the overall supply situation, the outlook for greatly expanded truck production is extremely uncertain. Truck production in February totaled 28,692 units, including 98 trucks for the military and 641 for the Chinese government, the lowest obtained in any month since Pearl Harbor. While there is little doubt that production will increase during the coming months, the Civilian Production Administration will not make any forecasts for at least another 30 days due to the many variable factors in the supply situation.

CPA is not unduly pessimistic, but is quick to point out that there is little justification for the optimistic predictions of the manufacturers. Industry forecasts have been overshooting actual production by wide margins, and are considerably higher than the totals expected by CPA for the next few months.

May Not Reach Million

The industry hopes to reach a monthly output of 125,000 units by June, and expects to turn out 1,000,000 commercial vehicles by the end of the year. CPA says this production won't materialize, and expects total production for the year to be closer to 880,000 units.

February commercial output of 14,244 lights, 9880 mediums, 2652 light-heavies, and 1177 heavy-heavies was about one-half the January total, due primarily to the steel strike and the GM shutdown. The settlement of these strikes will mean some increase in production; March totals are expected to show an increase of more than 25,000 units over February.

Strikes & Shortages the Cause

The primary reasons for the uncertainty surrounding future forecasts are: A continuing shortage of components; suppliers' strikes; a shortage of sheet steel; and a shortage of burlap.

Steel fabricators supplying components are caught in a squeeze occasioned by higher wage and materials costs. The OPA action suspending parts for original equipment from price control will help to speed up the supply of parts. But castings, still under price control, are in very short supply. Foundry backlogs of orders for castings for automotive uses run into the tens of thousands of tons.

An industry-wide price increase in malleable iron castings is expected soon, and should ease this situation. However, such an increase for gray iron castings will not be forthcoming for another 30 to 45 days.

The critical situation in parts has caused several producers to seek CPA aid in borrowing parts from Army Ordnance stocks — to be replaced when production approaches normal —in order to keep their lines open. Ordnance has been extremely cooperative in this respect, and in some instances has even loaned trucks to several segments of the economy.

Replacement Parts Bug

OPA's suspension of price control on truck parts for original equipment was no doubt welcomed by the industry, but it should be made clear that CPA expects this action to cut the output of parts for replacement purposes, since such parts remain under price control. Since price control on parts for new automobiles was suspended last August, there has been a consistent decline in the output of replacement parts for automobiles. Prices of original equipment auto parts have risen from 14 to 16 per cent since the suspension. A similar

(TURN TO PAGE 206, PLEASE)

26 BASIC DESIGNS

of Sealed Power Piston Rings

INDIVIDUALLY ENGINEERED

Oil control is one of the four outstanding advantages you can assure for your fleet—along with blow-by control (gas saving), low friction, and minimum wear—when you install Sealed Power Individually Engineered Ring Sets. These sets are developed by Sealed Power engineers from twenty-six (26) basic piston ring designs. Whatever the make, model, or degree of cylinder wear, there's a Sealed Power set specifically engineered to give balanced performance. Sealed Power has been refining these sets for seven years, has been producing rings for car, truck and engine manufacturers 34 years. For balanced performance, re-power with Sealed Power motor parts. Sold by America's leading distributors. Sealed Power Corporation, Muskegon, Michigan and Stratford, Ontario.

Piston Rings, Pistons, Cylinder Sleeves, Piston Pins, Valves, Water Pumps, Bolts, Bushings, Tie Rods, Front End Parts.

Keep Your War Bonds! Get $4 for $3!

SEALED POWER PISTON RINGS

BEST IN NEW TRUCKS! ★ BEST IN OLD TRUCKS!

FREE PUBLICATIONS

USE THE POSTCARD—NO STAMP NEEDED

A selected list of the latest in literature—books, pamphlets, catalogs—chosen to help fleet operators solve maintenance and operating problems. Use free postcard.

L40. Truck Lubrication Book

A 40-page booklet on truck and bus lubrication is now ready for the industry. This illustrated publication has been prepared as a contribution toward a better understanding of the problems involved in the application of modern lubricants in modern design vehicles.

The introductory chapters take up a study of the efficiency rating of the modern combustion engine, explain in clear, simple language the cause and effect of detonation, and stress preventive maintenance as an important step in securing better efficiency and longer life.

The chapter on motor oils includes a discussion on requirements, characteristics, viscosity, viscosity selection and index, information which will be valuable to the service man or fleetman selecting suitable motor oils for his particular vehicles.

Another chapter is devoted to a discussion of breakdown resistance, corrosive oxidation, varnish and lacquer, and contamination and dilution of the crankcase oil. Photographs and cut-away views show actual sludge and carbon formations resulting from low temperature operation and improper maintenance.

This booklet is outstanding in its approach to a subject deserving the attention of all connected with the truck industry. A copy may be obtained by writing L 40 on the free postcard.

L41. Steam Cleaning Booklet

A new 28-page pocket-size booklet on steam cleaning methods will be of interest to garage superintendents, foremen and others responsible for maintenance cleaning of machinery and equipment.

Described in this illustrated booklet are many applications of steam detergent cleaning for (1) cleaning machinery equipment and parts for subsequent repair and overhaul, (2) preparing equipment surfaces for repainting or refinishing, (3) cleaning equipment too large for tank immersion, or where suitable tanks are not available, (4) paint stripping.

Emphasis is placed on steam detergent cleaning as a simple, fast method for safely removing grease, oil, dirt and other deposits from all types of equipment through the combination of mechanical force, controlled heat and effective detergent action of recommended materials.

A copy of the booklet is available for the writing of L 41 on the postcard.

L42. Torque Wrench Data

A new 12-page catalog on torque tools has been made available to the fleet field. Included in the catalog is a listing of torque values for bolts, nuts, studs and cap screws. This is given for fine threads, coarse threads and for tubing fittings. Another important table that will be found valuable in the shop is a comprehensive table of suggested torque wrench readings for automotive work. It lists spark plug, cylinder head, manifold, bearings, wheel nut, flywheel bolt and a score of other suggested torque readings.

And finally, a table of suggested hacksaw blade tensions is listed for the convenience of the mechanic. The directions include an explanation of torque, as well as an explanation of conversion of in. lb. to ft. lb. and vice versa.

This data is available for the writing of L 42 on the free postcard.

L43. Hydraulic Brake Book

While many mechanics are familiar with the term "bleeding" as applied to hydraulic brake systems, this new 8-page booklet on "How to Bleed and Refill Hydraulic Brake Systems" will be found helpful in this operation.

The illustrated booklet shows step-by-step procedures in removing the air from the system when this practice is necessary. Experience has shown, says the author, that it is desirable to periodically change the fluid in a hydraulic brake system because of condensation and dirt accumulations. Illustrated in the booklet are proper tools and equipment for the job.

Write L 43 on the free postcard for a copy.

NEW PRODUCTS

USE THE POSTCARD—NO STAMP NEEDED

The newest in replacement parts, accessories, shop equipment and supplies. For more details of products described or advertised on these pages, use the accompanying free postcard.

P250. Adjustable Wrench

An automatic, adjustable, ratchet-action wrench is being marketed by Hedstrom Industries, Inc., Chicago.

Known as the Larc-o-matic, it provides instant thumb-trigger adjustment and an automatic "eye" adjustment control that keeps the jaws in constant grip on square, hexagonal, metric, and odd-sized nuts while the wrench handle is in manual operation. It automatically ratchets and secures a ¼-, 1/6-, 1/8-, and 1/12-turn grip for close-quarter work.

The wrenches are being manufactured in two styles—one utilizing a V-groove in the jaws to grip corners and faces of nuts alternately for close-quarter work, and another, which has pipe wrench teeth.

Currently the wrench is produced in three sizes: the 6-in. tool, opening to 13/16 in., the 8-in. model, opening to 1 in., and the 10-in. wrench, opening to 1 3/8 in.

Use Free Postcard For More Details.

P251. Heavy-Duty Spark Plug

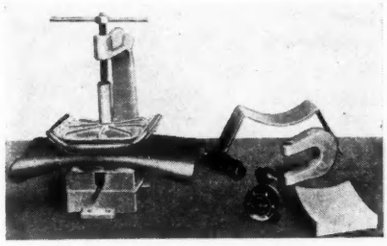
The new heavy-duty spark plug manufactured by Blue Crown Spark Plug Co., Chicago, is said to give longer life with fewer adjustments. The larger electrodes, with their generation of extra heat, have larger, more massive porcelain insulation. A controlled heat zone, electrode expansion space, "waist" threading and cementing of the electrode are features of this new 'husky."

Use Free Postcard For More Details.

P252. Tire, Tube Vulcanizer

The Service Master, a new tube and tire tread vulcanizer, has been announced by the Rockville Vulcanizer Equipment Co., Long Island City, N. Y.

This comparatively low-priced unit features the Plastomatic pressure "pillow," which permits uniform pressure regardless of thickness variations, distributing the pressure over the entire area under repair.



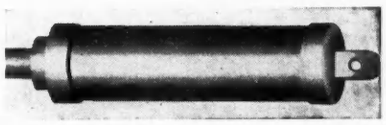
Not only can nail hole jobs be repaired, but major tears can be rebuilt with the 4 x 6 in. Plastomatic vulcanizing capacity. The unit also handles sidewall spot repairs on tires up to 7:00, and straight and angle valve replacements.

Use Free Postcard For More Details.

P253. Air-Operated Steering

The Air-O-Matic Power Steer, developed by the Air-O-Matic Power Steer Co., Cleveland, Ohio, is a compact, self-contained air-actuated, power steering unit of simple construction, which works automatically and can be easily attached to any truck without removing any part of the vehicle.

No buttons or levers are required to operate the "Steer." It works automatically, helping only as the operator of the vehicle pulls the steering wheel in one direction or the other.



The unit cannot be tampered with by the operator of the vehicle and does not interfere in any way with the free play of the steering wheel. Help is available whether the vehicle is in motion or standing still.

In the event of air failure, the steering mechanism would not be affected, operating just as it did prior to installation of the unit. Dimensions of unit, 4 in. diameter, approximately 29 in. in length.

Use Free Postcard For More Details.

P254. Cylinder, Saddle Tank

A combination cylinder and saddle gasoline tank is being marketed by

(TURN TO NEXT PAGE, PLEASE)

NEW PRODUCTS

USE POSTCARD BETWEEN PAGES 106 & 107

(Continued from Page 107)

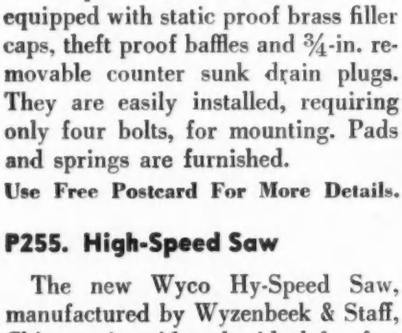
Dromgold & Glenn, Chicago, Ill. This new tank is constructed of two cylinder tanks, which form the overhanging compartments, and a deck plate fuel tank. A larger fuel capacity is said to be obtained with a minimum of weight in this design.

These Cylsad tanks are of all-welded construction, braced and trussed internally to withstand rough treatment. Dished heads of 12-gage pickled and oiled flanged steel provide crash resistance. A safety valve provides normal passage of air and prevents explosion due to accumulated pressure. The tanks are equipped with static proof brass filler caps, theft proof baffles and ¾-in. removable counter sunk drain plugs. They are easily installed, requiring only four bolts, for mounting. Pads and springs are furnished.

Use Free Postcard For More Details.

P255. High-Speed Saw

The new Wyco Hy-Speed Saw, manufactured by Wyzenbeek & Staff, Chicago, is said to be ideal for fast and dependable sawing or filing wood and metals. The unit is attached to any ¼-in. electric drill, air drill, or flexible shaft and is claimed to be easy to use in difficult places.

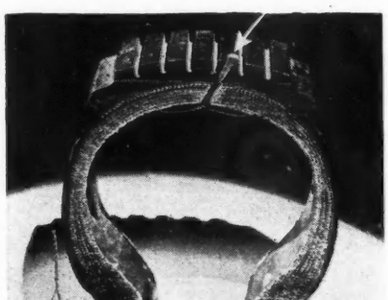


This new unit slips in the drill chuck or collet and uses ordinary hacksaw blades and standard ¼-in. shank machine files. A square plunger with takeup for wear assures true sawing, according to the manufacturer. All rotating parts are ball bearing mounted and run in oil. There are no gears or cams, and all parts are heat-treated.

Use Free Postcard For More Details.

P256. Blowout-Proof Rivet

A new product of the J. W. Speaker Corp., Milwaukee, Wis., is the blowout-proof rubber rivet, which permanently seals small breaks and nail or spike holes. By "flowing" into every inside crevice and putting a rubber "head" outside the original injury, the blowout-proof rubber rivet prevents water and slush seepage, chief cause of fabric rot and eventual blowouts.



Tires of automobiles, trucks and tractors, are protected against inside-rot blowouts with this device, which can be installed quickly.

Use Free Postcard For More Details.

P257. Nickel Steel Electrodes

The Lincoln Electric Co., Cleveland, Ohio, announces two improved electrodes for shielded arc welding of stainless steels. Known as "Stainweld A 7" and "Stainweld A 7-Cb," they are made for welding steels of the 18 per cent nickel type in all positions. Both electrodes are recommended where an austenitic (work-hardening) surface of medium hardness and good corrosion resistance is required.

Use Free Postcard For More Details.

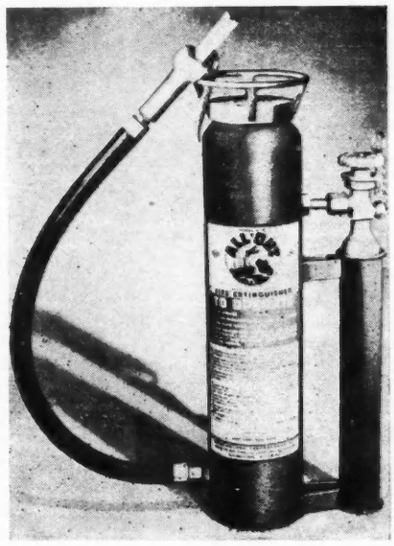
P258. Cleaning Compound

The Gaybex Corp., Nutley, N. J., has developed a new concentrated washing compound known as BEX Ut-30. This compound is said to be non-combustible, non-toxic and non-corrosive, and will clean any surface to which water may be applied. It is chemically neutral and has no adverse effect on the skin, cloth, metals or plastics, according to the manufacturer. It is odorless and in exceptional cases, may be used in concentrated form without risk. Dilutions vary for particular uses.

Use Free Postcard For More Details.

P259. Dry Extinguisher

A new fire extinguisher designed by Pressurelube, Inc., New York City, spreads a dense, fire-smothering cloud over a flaming area up to a distance of 18 ft. With this "All-Out" extinguisher, dry chemical is ejected under pressure in a flat stream that separates the flame from the burning material.



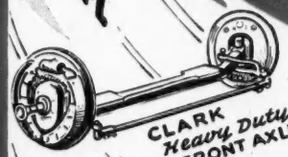
It is said to create an insulating barrier between the operator and the

(TURN TO PAGE 160, PLEASE)

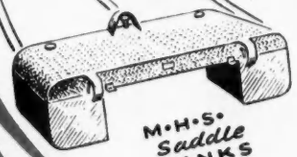
TRUCKSTELL ADDS TO *and* IMPROVES ITS LINE

SEE TRUCK SPECIFICATION TABLE FOR DATA ON TRUCKSTELL CONVERSIONS

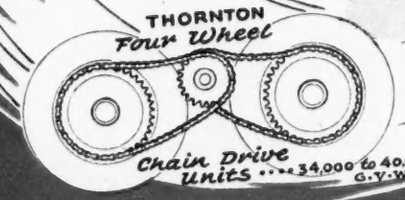
With



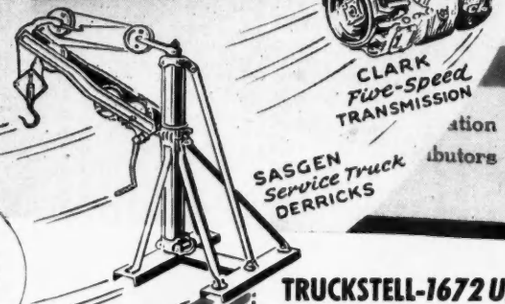
CLARK *Heavy Duty* FRONT AXLES



M·H·S· *Saddle* TANKS



THORNTON *Four Wheel* *Chain Drive Units* ···34,000 to 40,000 G·V·W·



CLARK *Five-Speed* TRANSMISSION

SASGEN *Service Truck* DERRICKS

ation

ibutors

TESTED AND APPROVED TRUCKSTELL TRUCK EQUIPMENT

ENGINEERED TRUCK Conversions for Every Load and Road

Thornton Four Rear Wheel Drive
Clark Booster Engine Conversion
Trusmore Third Axle Conversion
Clark Heavy Duty Demountable-Rim Cast Wheels
Thornton Automatic-Locking Differentials
Champion Safety Gas Tank
Wotson Auxiliary Transmissions
Clark Heavy Duty Axle
TRUCKSTELL EQUIPMENT ASSURES BETTER HANDLING OF ALL LOADS OVER ALL KINDS OF ROADS

The TRUCKSTELL Co.
CLEVELAND · O·

EVERY COLOR SPOT

A NATION WIDE DISTRIBUTOR ORGANIZATION *is ready to serve you*

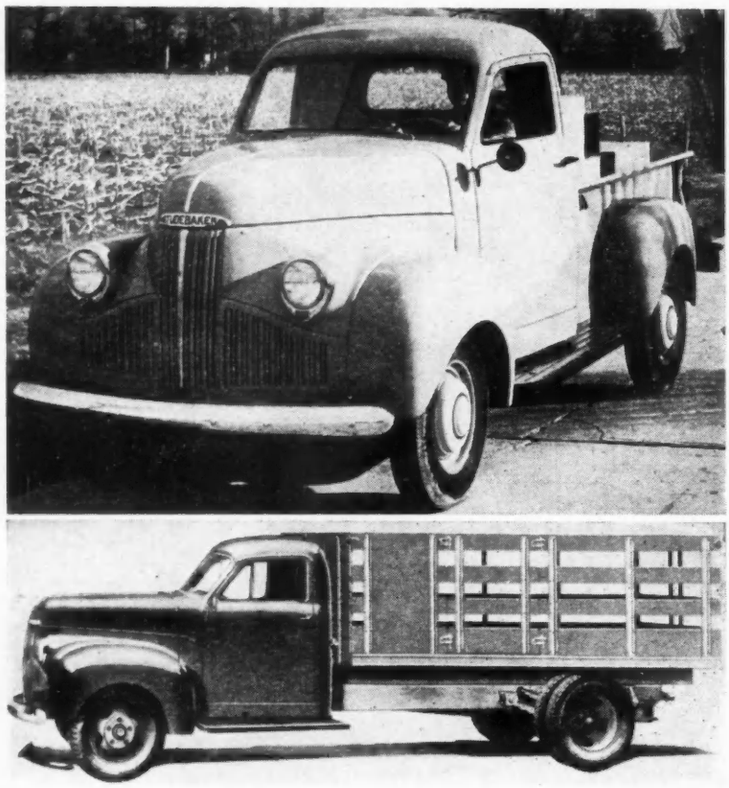
Fill out, clip and mail coupon

TRUCKSTELL-1672 Union Commerce Bldg. CLEVELAND

☐ ***Send us the name of the nearest* TRUCKSTELL DISTRIBUTOR**

☐ ***Send literature describing equipment distributed***

Name_____



Top. The ½-ton Coupe Express, powered with 6-cyl. Econ-o-miser engine. Body is 78 3/16 in. long and 48½ in. wide. Max. gross rating, 4500 lb. Above. The 1½-ton, suitable for 9-, 12-, and 18-ft. bodies. Available in three wheelbases. Max. gross rating, 15,000 lb.

1946 Studebaker Trucks Feature Comfort and Safety

Light models have improved cabs, larger bodies, better springing; 1½-ton has new brake, heavier frame, 4-speed trans.

TWO important pieces of commercial car news came from The Studebaker Corp. in April. The first was an announcement of 1946 models in the light and medium truck fields.

In the second, the company disclosed that it has put into operation a new $1,500,000 cab and pick-up body factory that considerably increases production facilities. The manufacturing addition gives the company a modern, two-story plant that separates all truck assembly operations from that for passenger cars. Installations include framing jigs, welding equipment, paint spray booths, bonderizing and drying ovens and an exclusive upholstery and trim department. The body factory augments an expansion program launched during the war to provide for an output of 200,000 heavy duty, military trucks.

Highspotted by new versions of Studebaker's Coupe Expresses, the 1946 series includes a ½-ton, 1-ton and 1½-ton sizes in a variety of pick-up, stake, and cab and chassis models.

Details of the line follow:

Half-ton—The Coupe Express pick-up. Powered by the six-cylinder Econ-o-miser engine, which proved its worth in the wartime Studebaker Weasel, this vehicle has a maximum gross rating of 4500 lb with 6.50x16 six-ply tires. The pick-up body measures 78 3/16 in. by 48 1/2 in., the extra half-inch in width facilitating the loading of materials of exact 12-in. dimensions.

Special emphasis is placed on driver comfort and convenience. Easy riding, two-stage rear springs and shock absorbers are standard. The V-type windshield is big, with dual wipers and visors. Other cab features list rotary door latches, extra-wide seat, hood lock control, door lock, cowl ventilator, ventilating wings, adjustable seat cushion and back, defroster vents, arm rests, dome light, radio opening and package compartment, safety glass throughout and outside rear view mirror.

Chassis and engine specifications include such features as automatic choke, shockless steering, 7-in. frame, handbrake on rear wheels, Hotchkiss drive, hypoid rear axle, octane

(TURN TO PAGE 140, PLEASE)

SHULER AXLES

Almost everybody knows of "Shuler Axle" as a highly-competent manufacturer of fine, heavy-duty trailer axles — but some are not familiar with the *completeness* of the Shuler line. If you are looking for a good source for any of the items listed below, we invite your correspondence. Shuler maintains an experienced engineering staff, and complete die, forge and machine shops. We have the facilities and the *will* to serve you promptly and well. Drop us a line today.

COMMERCIAL TRAILER AXLES—One-Piece Tubular or Square

Capacities in one-piece tubular: 8,000, 11,000, 13,000, 17,000, 18,000 and 25,000 lbs.

Capacities in one-piece square: 7,500, 10,000, 12,000, 15,000, 18,000, and 25,000 lbs.

Track Sizes: Standard and special track sizes available in all models.

Brake Sizes: 4″, 5″, 6″, 7″, and 8″ — Air or Vacuum.

Hubs: for all sizes of Budd 6 and 10 Stud, Chevrolet, Ford or Motor Wheels. Axles provided for Dayton and Erie Cast Wheels. All sizes of axles available for Tandem Units.

Special West Coast Axles (engineered and developed for West Coast applications).

MACHINERY TRAILER AXLES—With Trunnion Mounting

Capacities: 11,000, 13,000, 16,000, 18,000 and 25,000 lbs. per axle. *Brake Sizes:* 12-1/4 x 5 for 15″ wheels.

Hubs: for 5 and 6 Stud Budd or Motor Wheels. Axles provided for Dayton and Erie Cast Wheels.

FRONT AXLES

For heavy-duty trucks and off-the-highway equipment. Capacities and specifications available on request.

HOUSE TRAILER AND FARM WAGON AXLES

Front-knuckle steer and rear axles in 2,000, 3,000 and 4,000 lbs. per axle capacities, with or without mechanical brakes and wheels.

BRAKES AND DRUMS

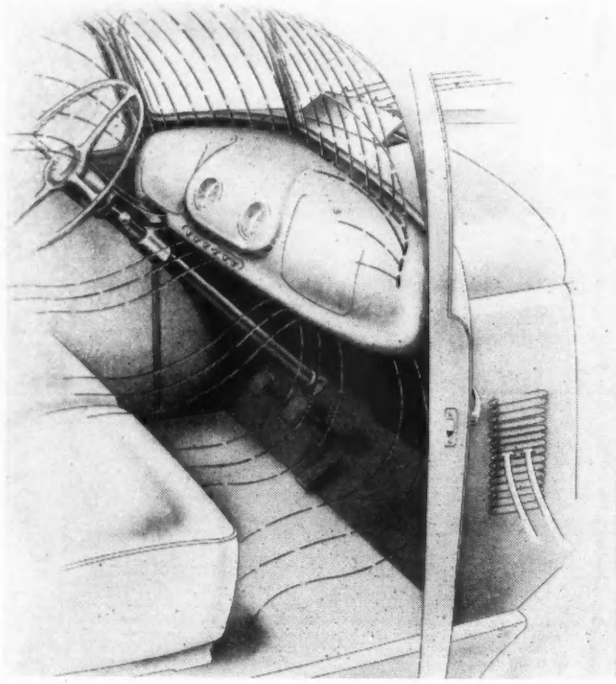
Mechanical, for vacuum or air actuation. Capacities and specifications to meet every need.

AUTOMOTIVE SPECIALTIES

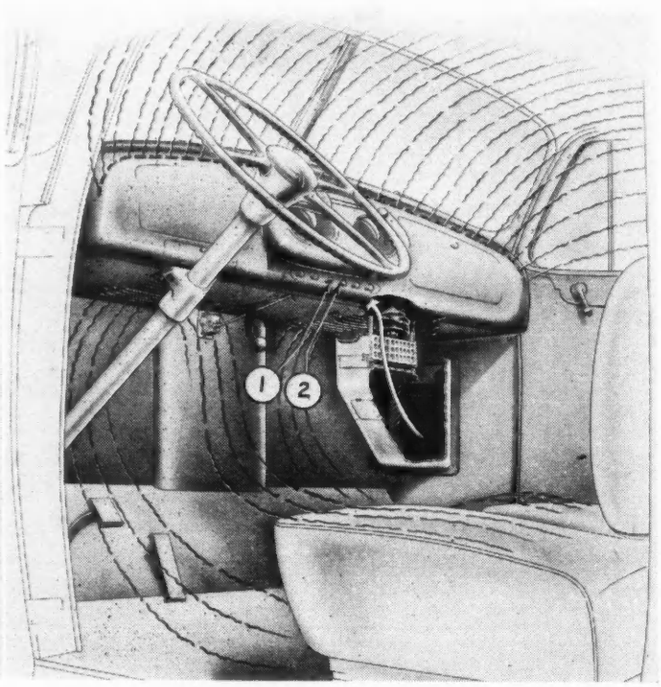
Fifth-Wheel King Pins—Carbon or Alloy Steel, standard SAE size for bolting, riveting or welding. . . . Stub Spindles in stock and special sizes for every application. . . . Tow Bar Hitches (Lunette Eyes). . . . Forged Spring Seats. . . . Air and Vacuum Diaphragm Brackets. . . . Miscellaneous Forgings for the Truck and Trailer Industry. . . . All these and others are available from Shuler. *Write us today for sizes, specifications and prices.*

SHULER AXLE CO., Incorporated . . LOUISVILLE, KENTUCKY

Export Division: 38 Pearl St., New York, N. Y. ● West Coast Warehouse: 2937 Ford St., Oakland Cal. ● Detroit Office: 8424 Woodward Ave.



With the Evans heating and ventilating system air enters from side louvre and cowl and is forced throughout cab in all directions for summer conditioning of the interior



Warm air driven by a heavy-duty fan is distributed through various vents to maintain even temperatures in the coldest weather. Temperature control shown at 1, air control at 2

Cab Conditioning System for All-Weather Operation

"Airfoil" unit designed in cab provides directed heating, controlled temperature, defrosting system as well as fresh air

. . . AND FOR SUMMER . . .

The sealed area under dash provides a pressure chamber capable of containing air at higher than atmospheric pressure. This provides, in effect, a pressurized cab. In summer, the cowl is opened to introduce fresh air into the plenum chamber. Even when standing, or in driving rain, the fan can be turned on to direct cool air over driver's body and hands.

RECOGNIZING the interest on the part of fleet operators in driver comfort in motor trucks, the Thermo-Aire Div., Evans Products Co., Detroit, Mich., has announced the development of the Evans-System for truck cab heating and ventilating. The heart of this system is an Evans "Airfoil" fan with motor drive which can be incorporated into the design of cabs by the vehicle producer. Because of the special features of cab design required for the installation, the Evans-System cannot be installed economically in an existing cab.

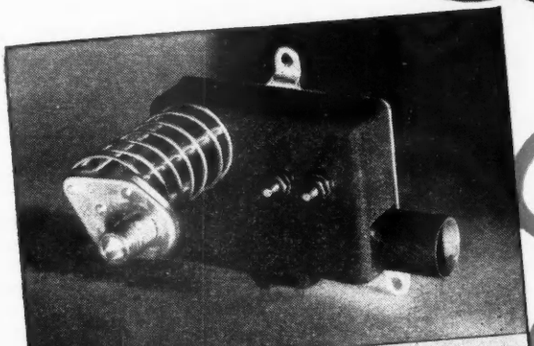
Secret of successful operation is said to be found in the exclusive "Airfoil" fan which has the ability to handle a large volume of air against the pressure necessary to do a complete job with the lowest possible drain on the battery. This type of fan is so compact as to require the very minimum of space for installation. The heavy-duty fan motor, designed expressly for the purpose provides maximum efficiency at low amperage. Another feature is the use of a large heater core with adequate capacity to permit the driver to dress lightly and comfortably even under sub-zero operating conditions.

As illustrated, the fan and core assembly is installed in a suitable chamber on one side of the cab, communicating directly with a weatherproof ventilator or louver in the side of the cab. Because of its compactness, the assembly can be located in any convenient place to suit the arrangement of the cab and on either side. It can be tapped anywhere to

(TURN TO PAGE 117, PLEASE)

QUICK HEAT FOR TRUCKS, INDEPENDENT OF ENGINE!

NEW! South Wind DELUXE TRUCK HEATER



• Unique modulating flow temperature control device "anticipates" temperature changes—adjusts heater operation to maintain preselected temperature in the truck or trailer.

Protect Perishables . . . Keep Windows Clear . . . Get Quick Starts in Cold Weather . . . Keep Drivers Safer, More Efficient

A FEW QUICK FACTS

- Maximum heat output of 20,000 BTU's per hour.
- Hot heat quick—in less than a minute.
- Works independently of the engine.
- Can be used to warm up engine for easier starting.
- Delivers more than 100 cubic feet per minute of warmed fresh air.
- Prevents fogging and frosting of windshield and windows.
- Burns gasoline from the fuel pump in a patented sealed metal chamber—the famous South Wind "sealed flame" principle.
- Always ready for use. Need not be disconnected in summer.

• OUT OF SOUTH WIND'S vast experience in developing heaters for tanks, PT boats and airplanes comes this new South Wind Deluxe Truck Heater.

You can operate this new kind of heater independently of the engine. It can be used to heat the engine for quick starts in cold weather. The automatic temperature control, which you can set and forget, not only protects perishable cargo, but also keeps your drivers comfortable and efficient. More than 100 cubic feet of warmed fresh air per minute keeps cab windows from fogging or frosting.

There are many types of installations to meet various operating conditions. Why not talk over your truck or trailer heating problem with our engineers? No obligation. Write to South Wind Division, Stewart-Warner Corporation, Dept. 930, Indianapolis 7, Indiana.

Another Product of STEWART WARNER

South Wind

REG U. S. PAT. OFF.

DELUXE TRUCK HEATER

A.A.A. Reports on Auto Breakdowns for 1945

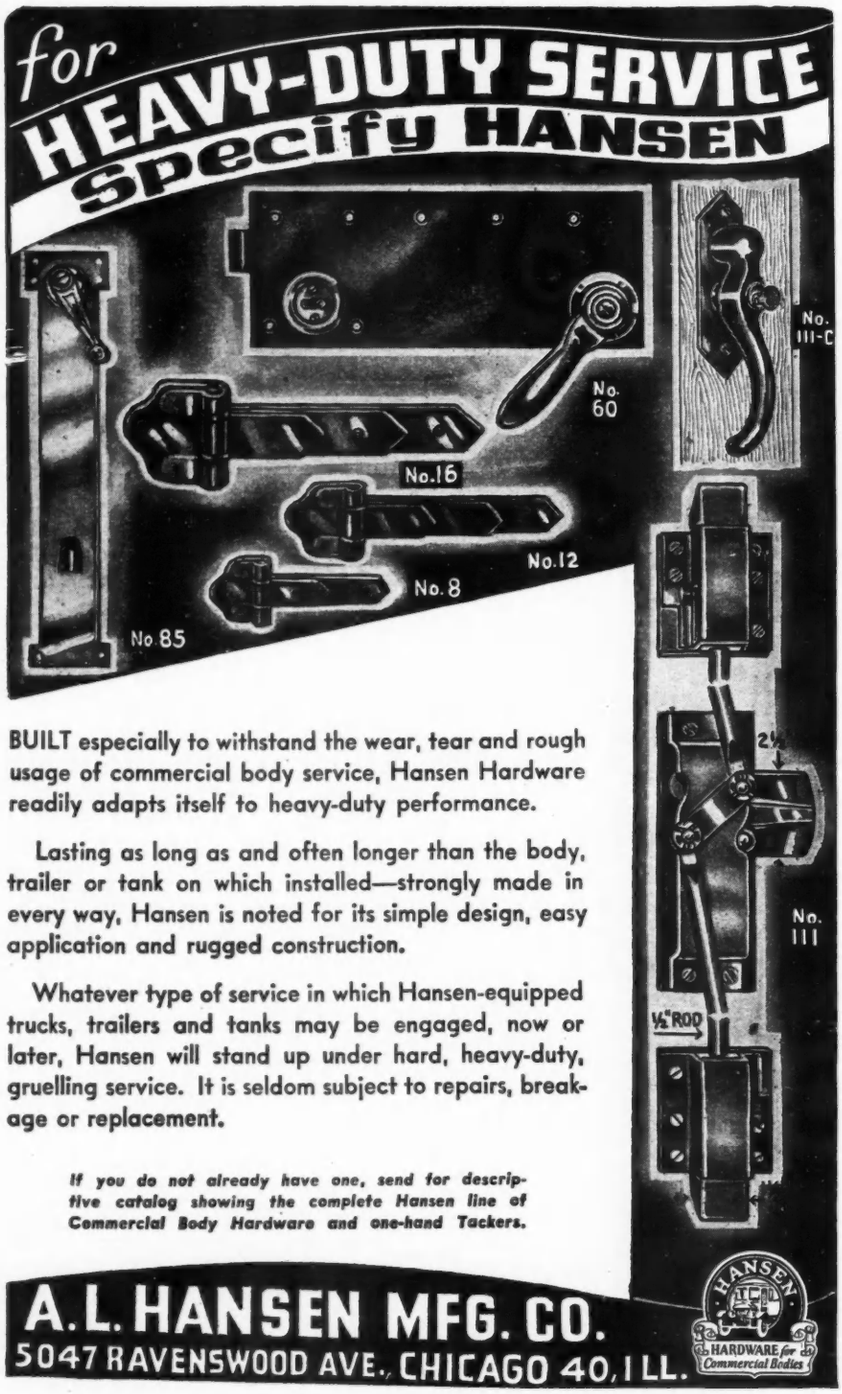
The number of automobile breakdowns reached record-breaking proportions during 1945, with tire trouble heading the list of motoring headaches, according to findings of the American Automobile Assn. Reports from 1200 garages under contract to render service to A.A.A. members show a total of 36,000,000 breakdowns in 1945, compared with 30,000,000 in 1944, and 31,000,000 in the prewar year of 1941.

Batteries, like tires, were in scarce supply and were in second place as a trouble cause. More than 6,000,000 motorists were unable to start their cars last year because of dead batteries.

Some 4,546,000 cars refused to start because of ignition trouble, while an almost equal number suffered such serious trouble that they could not be repaired on the roadside and had to be towed in.

These complaints and other common troubles classified by A.A.A. are listed below for the years 1944 and 1945.

Type of Service	Number of Breakdowns		Percentage of Total	
	1945	1944	1945	1944
Tire	11,317,000	9,152,000	31.29	29.8
Battery	6,115,000	4,655,000	16.91	15.2
Ignition	4,546,000	4,793,000	12.57	15.6
Tow	4,510,000	2,990,000	12.47	9.7
Carburetor	2,839,000	2,533,000	7.85	8.3
Wrecker (Crane)	1,211,000	1,044,000	3.35	3.4
Stuck (Sand, Mud, Snow)	1,008,000	534,000	2.79	1.7
Out of Gas	849,000	1,207,000	2.35	3.9
Starter	578,000	632,000	1.60	2.1
Lock & Key	368,000	473,000	1.02	1.5
Gas Line	318,000	927,000	.88	3.0
All Others	2,503,000	1,763,000	6.92	5.8
Total	36,162,000	30,703,000	100.0	100.0



BUILT especially to withstand the wear, tear and rough usage of commercial body service, Hansen Hardware readily adapts itself to heavy-duty performance.

Lasting as long as and often longer than the body, trailer or tank on which installed—strongly made in every way, Hansen is noted for its simple design, easy application and rugged construction.

Whatever type of service in which Hansen-equipped trucks, trailers and tanks may be engaged, now or later, Hansen will stand up under hard, heavy-duty, gruelling service. It is seldom subject to repairs, breakage or replacement.

If you do not already have one, send for descriptive catalog showing the complete Hansen line of Commercial Body Hardware and one-hand Tackers.

A. L. HANSEN MFG. CO.
5047 RAVENSWOOD AVE., CHICAGO 40, ILL.

HANSEN
HARDWARE for Commercial Bodies

QUIZ ANSWERS

CCJ Quiz On Page 100

1. b. The common term for a truck in England is "lorry."

2. b. You shouldn't. A "saloon" to the British is not a drinking place but is the same as our term "sedan."

3. b. The front fenders are known as "wings" and the rear fenders "mudguards."

4. a. It's a "windscreen" over there.

5. a. The British term "bonnet" is the same as our term "hood."

6. b. A bobby is a policeman, so it means disregarding a stop sign.

7. d. It means filling the battery with water.

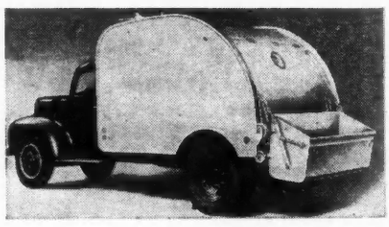
8. c. To step on the gas.

9. b. To go at top speed.

10. a. 25. In England, "petrol," which we call gasoline, would be measured in Imperial gallons. An Imperial gallon is 1.20094 U. S. gal.

END

(Please resume your reading on P.102)



The new all-enclosed refuse collector called the "Bucket Loader" developed by Gar Wood Industries, Inc., Detroit, is said to meet the demands of health officials throughout the country for this type of unit. The all-steel, all-welded body comes in two sizes, either 6¼ or 8½ cu. yds. The body is supplied with the Gar Wood hydraulic hoist for dumping. The loading bucket is suspended at a low level to prevent undue fatigue or injury to the loaders, and the controls are simple for quick and easy operation on the job

CAB CONDITIONER

(CONTINUED FROM PAGE 112)

deliver air at any number of desired locations.

In the arrangement shown here, the area under the instrument panel is thoroughly sealed to provide a plenum or pressure chamber capable of containing air at higher than atmospheric pressure. This provides, in effect, a pressurized cab with fresh air constantly drawn in from the outside and constantly forced out of the cab through door and window and pedal openings. This keeps out drafts as well as exhaust fumes.

In contrast to the conventional means for heating and defrosting, the new system incorporates a large series of small slots in the instrument panel, extending the full width of the panel and around the sides, if desired, so as to provide complete defrosting of the windshield and the side windows. In addition, outlets can be provided at points under the panel for directing heated air to the seat and floor, and over the pedals to keep the driver's feet warm. As shown here there also is a louver in the lower edge of the panel, near the steering column which can be opened to direct cool air to driver's body and hands in warm weather. In extremely cold weather, it is possible to close off all air outlets except the defroster louvers if it is necessary to clear up badly iced glass areas such as might result from exposure to a bad storm.

The system is designed to operate with automatic temperature control through the installation of a positive acting thermostat, adjustable by the driver, for any desired cab temperature. This control is said to be automatic and accurate regardless of outside weather and of engine temperature.

For summer operation, the standard cowl ventilator can be employed for introducing fresh air into the plenum chamber and out into the cab through the openings and ducts. If the truck is standing still or moving slowly in traffic or on grades, when the cowl ventilator is not effective, the driver can turn on the fan so as to force air into the cab from the side louver. This can be done, too, when driving in rain with the cowl ventilator closed. The thermostat automatically turns the hot water on or off as required by its setting.

For vehicles operating entirely in Southern climates, where heat is never required, the system can be installed originally without the heater core, thus using the "Airfoil" fan only for atmospheric air circulation.

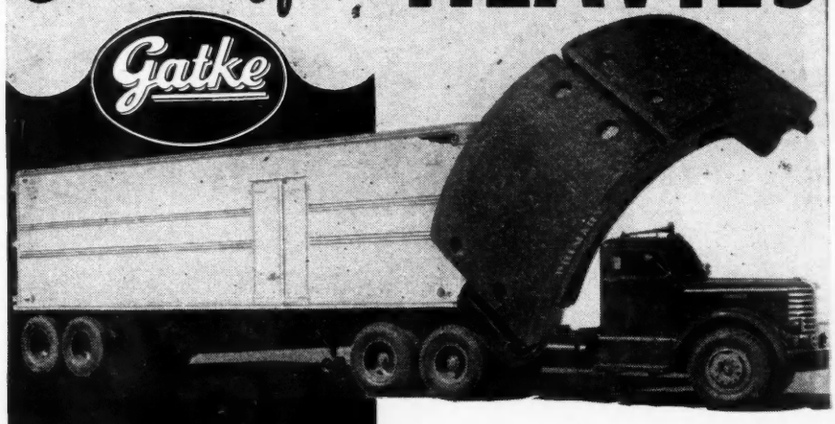
Wagner Announces Appointments

Wagner Electric Corp. announces the following changes in automotive branch personnel:

Forrest G. Wilson, formerly a salesman at the Dallas branch, has been appointed manager of the Indianapolis branch. H. F. Zahn, formerly manager of the Atlanta branch, has been made manager of the Philadelphia branch. C. G. Jackson, formerly manager of the Boston branch, has been moved to Atlanta to manage that branch. J. K. Miller, heretofore a New York branch salesman, has taken over the management of the Boston branch.

Choice of the HEAVIES

Gatke



INTRODUCED Genuine Moulded Brake Lining for automotive use.

ORIGINATED Wire-Back Moulded Brake Block.

DEVELOPED the first patentable automotive brake lining.

PIONEERED *CUSTOM-BILT* Brake Lining Sets.

LED the development of Brake Blocks for Trucks, Trailers and Buses.

CHAMPIONED the correct balance between liners of primary and secondary shoes as essential to maximum brake efficiency.

INVENTED Grooved DURA-BLOK Brake Lining.

PERFECTED the Simplified Brake Survey System for Fleets.

The *extra* performance qualities of GATKE Brake Blocks and Linings are *increasing efficiency* and *reducing maintenance* for Fleet Operators all over America—

The smooth, *non-grabbing* action *saves* tires and *reduces* strain on equipment, as well as operators.

Correct frictional balance with constant holding power—*no loss of efficiency on steep grades or in prolonged use.*

Long wear life for *better* mileage with *fewer* adjustments.

You eliminate guesswork and get the benefit of years of experience when you get GATKE *CUSTOM-BILT* Brake Blocks.

Just ask your GATKE Jobber or write.

Gatke CUSTOM-BILT BRAKE LININGS

BLOCKS SETS ROLLS SHEETS

GATKE CORPORATION

228 N La Salle St. Chicago 1, Ill.

CCJ NEWSCAST

ATA SAFETY MEETING

The spring meeting of the Safety and Operations Section of American Trucking Assns., Inc., will take place in Cleveland, Ohio, May 27, 28 and 29.

One of the principal items up for discussion will be ICC Safety Regulations, which will be opened up for revision some time in the near future. Among the items which will be considered are hours of service and drivers' log rules, whether or not sleeper cabs should be banned, and other related subjects.

Various other papers will be presented during the sessions, on driver selection and training, how to prepare a company bulletin, industrial safety in handling materials, fire fighting and fire prevention and safety psychology.

OUT OUR WAY

Get rid of ice-slick floors around your garage, shop, filling-station, bus- or truck-terminals. They're dangerous! How? Just spread SOL-SPEEDI-DRI, the granular, oil-thirsty absorbent, around on oil-slick surfaces. It works . . . while you work in safety! And no costly machinery . . . no trained personnel . . . is needed to use SOL-SPEEDI-DRI! One man to spread it around . . . and you've got a fall-proof, magic carpet underfoot. The same man to sweep it up, leaving clean, safe floors!

SUPPLIERS: East—Safety & Maintenance Co., Inc., New York 1, N. Y.
South, Midwest & West Coast—Waverly Petroleum Products Co., Philadelphia 6, Pa.

SOL·SPEEDI·DRI
OIL AND GREASE ABSORBENT
UL
Pin your card to this advertisement and mail today for the full story, and a generous, free sample of SOL-SPEEDI-DRI.

SERVICE PARTS VOLUME UP

The automotive service parts volume in 1946 promises to total some 15 to 20 per cent over last year's high levels, it is indicated by a survey of the first postwar automotive market recently completed by the Automotive Advertisers Council.

The survey indicated that there will be increasing competition for the automotive wholesaler in the postwar period on several fronts. Group buying organizations for fleet owners is considered one of the factors which are seen as becoming more aggressive in sales efforts. The survey showed that one of the principal steps the wholesaler should take to protect his position is to cultivate fleet business more aggressively.

TIRE PRODUCTION TO RISE

American tire production will total 90 million units for 1946, and synthetic rubber research should be pushed to the utmost for the next two years "and the road kept open for private purchase and operation of the plants," in the opinion of John L. Colyer, president of the B. F. Goodrich Co.

Addressing the Chicago Technical Societies Council, the Akron executive pointed out that rubber industry reconversion has been rapid, and that tire production this year will be at a rate 46 per cent above the 1940 level of output.

"We are glad to take orders today for airplane tires and can promise almost immediate delivery," Mr. Collyer said. "Truck and farm tires should be in ample supply by midsummer; for passenger-car tires you may have to wait several weeks after placing an order—but by the end of 1946 you should be able to get as many tires as you want of your brand and size."

HOLLINGSWORTH TRANSFERRED

R. B. Hollingsworth has recently been appointed manager of the of the Fruehauf Trailer Co., Atlanta Branch, as announced by A. K. Tice, vice president in charge of sales.

WHEEL & RIM PLANS CAMPAIGN

Warning that the nation faces drastic breakdown of its automotive transportation system unless quick action is taken to make possible necessary repair and replacement work, executives of the National Wheel & Rim Assn. have set in motion a program which may greatly relieve the situation during the early months of next year.

"Major danger points in trucks and cars operating today are to be found near the ends of the axles, said association presi-

(TURN TO PAGE 120, PLEASE)

When You're on the GO Be Sure You Can STOP

MIDLAND HYPOWER unit, shown below, assures positive braking thru direct applied power and unfailing operation. Scientifically designed. Ruggedly constructed. Trustworthy under all conditions. All moving parts completely enclosed — protected against all weather and atmospheric conditions: Get full information about HYPOWER. Write today.

THE MIDLAND STEEL PRODUCTS CO.
10605 MADISON AVENUE, CLEVELAND 1, OHIO
Export Department: 38 Pearl Street, New York City

Enlarged plant facilities make it possible for us to consider the manufacture of a few items in household or office appliance, automotive or mechanical fields, in small or medium size fabrications. We invite inquiries to Midland New Products Dept. at the above address.

MIDLAND
CHRISTENSEN
POWER BRAKES

CCJ NEWSCAST

(CONTINUED FROM PAGE 118)

dent H. M. Young. "Wheels, rims, tires, brake drums and the many attaching parts they require have taken punishment during war days, punishment that we normally would believe impossible for them to bear. It has not been the fault of the vehicle owner, beset by rationing. It has not been the fault of the auto service stations or tire dealers, restricted by shortages in materials and manpower. But, it certainly is a condition we all must cooperate in correcting before we pay dearly with our lives in the widespread accidents which threaten as long as worn and damaged mechanical parts and tires remain in use."

Keynote of the National Wheel & Rim Assn. policy is the desire to weld together a concentrated program to restore essential wheel, wheel parts and tire service throughout the nation. To accomplish this, leading manufacturers and distributors of the industry have sent their representatives to aid in formulating a master plan.

This plan, it is hoped, will result in an increased flow of necessary products to service outlets and an educational campaign to impress upon automobile and truck owners the necessity of repairing or replacing rims, wheel and brake units no longer fit for efficient, economical and safe operation.

SERVICE EMPLOYEES COVERED

The Supreme Court has ruled that neither a service establishment nor the motor carrier exemption from maximum hour provisions of the Fair Labor Standards Act applies to mechanics engaged in greasing, repairing or servicing vehicles owned and operated by a drive-away company which transports automobiles in interstate commerce.

The case in question was that of Boutell vs. Walling, in which the Federal Wage-hour Administrator had obtained an injunction in the lower courts to restrain alleged violations of the maximum hour provisions of the act. The employer appealed from an affirmative ruling of the Sixth Circuit Court of Appeals.

The higher court decided that service company employees do do not come within the exemption stated in Section 13 (a) (2) because their employer supplies its services, including their services, exclusively to the drive-away company, which in turn uses those services in interstate commerce.

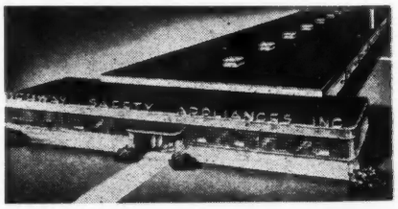
STUDY CITY TRAFFIC PROBLEMS

Expressways and other arterial improvements on which work soon will be started in a number of large cities will speed up the movement of traffic through urban areas, but they will tend to increase traffic congestion in the downtown sections of cities unless the new thoroughfares are supplemented by adequate parking facilities.

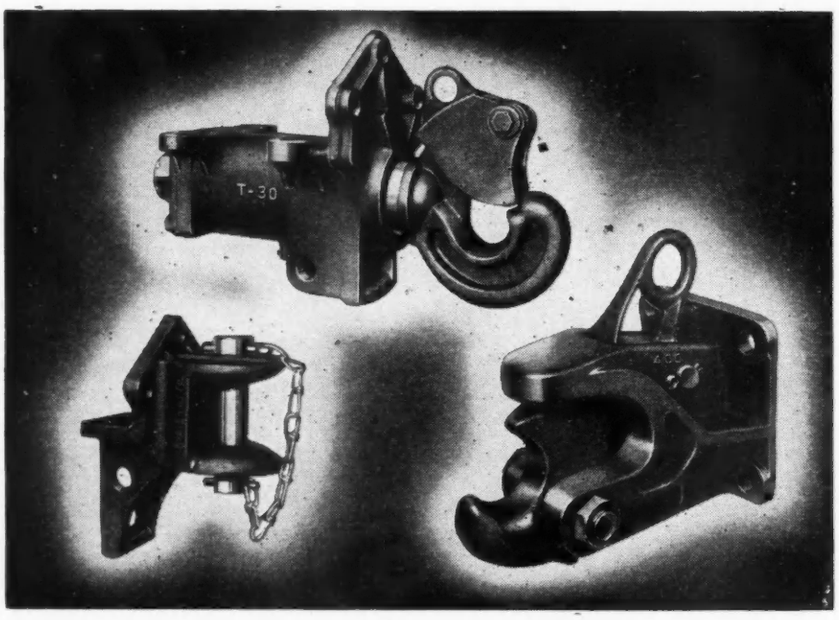
That is the warning given by Thomas H. MacDonald, Commissioner of Public Roads, and other highway authorities who have made an intensive study of post-war traffic problems.

The Public Roads Administration is assisting State highway departments and city engineers by supplying the services and advice of Public Roads engineers who have studied traffic problems in cities

(TURN TO PAGE 122, PLEASE)



Architect's drawing of the new $100,000 factory building of Highway Safety Appliances, Inc., St. Paul, Minn., manufacturers of the Elston Electric Sander. A one-story structure, modernistic in design and fronting on a tract 432 ft., the building will contain 25,000 sq. ft. of floor space. Steel, brick, and glass blocks are used throughout with more than 3000 sq. ft. of glass being utilized on the front and sides of the building



NEW Double Acting Pintle Hooks
Automatic Industrial Couplers
Solid Couplers for Trucks & Trailers

Write for detailed specifications of the complete Holland line.

All types for all purposes—engineered for smooth, efficient performance, with many special features that make the Holland line preferred by experienced truck and trailer fleet operators. Whatever your needs in pintle hooks, couplers, bars, or hitches, come to Holland with your problems;—you'll find the right product for the right spot.

Made by the makers of Famous Holland fifth wheels and landing gears.

ENGINEERED BY
HOLLAND HITCH COMPANY
HOLLAND, MICHIGAN, U. S. A.

SEALED POWER HEAVY DUTY PISTONS

- **T-SLOT DESIGN**
  Assures lower and more uniform temperature throughout piston.
- **CAM GROUND**
  Assures correct shape and INCREASED BEARING AREA at operating temperature.
- **FINEST ALUMINUM ALLOY #132**
  Sealed Power heavy duty pistons are made exclusively from virgin aluminum alloy #132.
- **RUGGED INTERNAL CONSTRUCTION**
  for heavy duty service with extra metal added for correct heat transfer and extra strength.

IT PAYS TO SPECIFY SEALED POWER HEAVY DUTY PISTONS

SEALED POWER CORPORATION

MUSKEGON, MICHIGAN · STRATFORD, ONTARIO

CCJ NEWSCAST

(CONTINUED FROM PAGE 120)

throughout the country. They advocate the development of off-street parking facilities in all cities where downtown parking is a serious problem. They warn, however, that the problem cannot be solved by haphazard methods.

Some of the steps recommended are stricter enforcement of curb-parking regulations, revision of existing regulations to eliminate altogether or greatly reduce the parking time permitted on congested streets during peak-traffic hours, and readjustment of rate schedules to encourage short-time parking on off-street facilities in the central business district.

Traffic engineers also favor the adoption of zoning regulations requiring new business and residential developments to provide their own off-street parking facilities.

NEW TRANSPORT EQUIPMENT WILL COST $2 BILLION

Replacement of war-battered fleets will cost the trucking industry approximately $2 billion during reconversion, Ted V. Rodgers, president, American Trucking Assn., Washington, D. C., told members and guests attending the recent meeting of the National Wheel and Rim Association at the Edgewater Beach Hotel.

Asserting the speedy return to normal conditions in motor transport operations hinges upon new equipment and rates that permit a fairmargin of profit, Rodgers said motor carrier expenses last year ate up 97.2 cents out of every revenue dollar, and that expenses in September this year exceeded revenues by 2.3 cents on each dollar.

"The trucking industry is in dire need of relief," declared Rodgers. "It wants no subsidy—no favors. It asks only an end to a destructive policy which is contrary to the intent and will of Congress."

Pointing out that less-than-carload freight is the life-blood of the trucking industry, Rodgers said, "Railroad revenue from this type of freight is relatively insignificant—less than 5 per cent of their total revenue, but it accounts for more than 80 per cent of the total revenue of motor carriers.

"Aware of this fact, the railroads deliberately have maintained LCL rates at a level below their cost of operation. The rails lose millions of dollars annually as a result of this calculated attempt to destroy their competitors who are faced with the choice between losing the business to the rails or meeting the non-compensatory railroad rate level.

NEW U. S. RUBBER AUTO SEAT

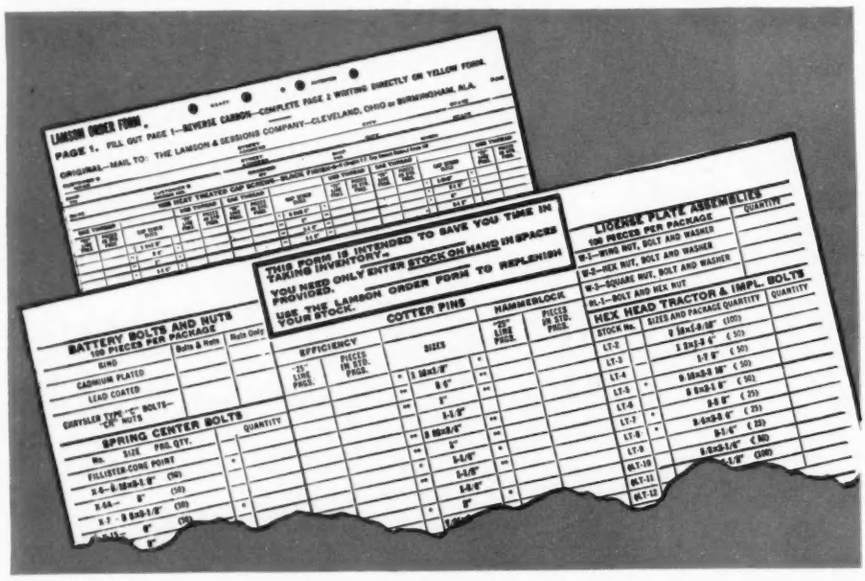
A new type of automobile cushion that combines three developments and promises increased seating comfort were described by Dr. M. C. Teague of the United States Rubber Co. in a speech before the National Farm Chemurgical Council meeting held in St. Louis recently.

This pneumatic cushion, called Crestaire, showed satisfactory results in recent tests with respect to load deflection, vibration frequency, damping and other engineering characteristics, according to Dr. Teague. A combination of the pneumatic cushion, foam rubber pad and elastic fabric developed by the company is said to provide cushions with greatly increased riding comfort.

The new seat is not yet in commercial production, said Dr. Teague, although there is reason to believe that it will be before we get very far into the postwar period.

(TURN TO PAGE 124, PLEASE)

The household goods of 52 individual families leave Detroit in one huge shipment bound for Los Angeles. Pruehauf trailers in the E. H. Warren fleet lent a 1946 version to the "covered-wagon train" across the nation to establish new homes in sunny California. This record load of furniture required 10 trailers with even the tailgates loaded to capacity. The units took only 8 days to make the 2450-mile run


LAMSON ORDER FORM
BATTERY BOLTS AND NUTS
100 PIECES PER PACKAGE
SPRING CENTER BOLTS
THIS FORM IS INTENDED TO SAVE YOU TIME IN TAKING INVENTORY.
YOU NEED ONLY ENTER STOCK ON HAND IN SPACES PROVIDED.
USE THE LAMSON ORDER FORM TO REPLENISH YOUR STOCK.
COTTER PINS
HAMMERLOCK
LICENSE PLATE ASSEMBLIES
100 PIECES PER PACKAGE
HEX HEAD TRACTOR & IMPL. BOLTS

Here's Something We Don't Sell

Writing up orders and taking inventory is a job you have to take care of, if your business is going to take care of you—but this "paper work" is sometimes inconvenient, often distasteful and always time-consuming.

We know how it is to handle a lot of items and keep stocks up to date, so we're passing on to you *two paper forms* which were designed especially for you when you order bolts and nuts. We've taken 90% of the work out of both *orders and inventories* of these items. Just write in the *quantities*—and nothing else except *your name and address.* (We have indicated rapid turn-over sizes by (*) asterisks.) Jobbers have used these forms for years. Your jobber's salesman will help you if you like but meanwhile, ask us for the Lamson *Order and Inventory Forms.* No charge of course.

THE LAMSON & SESSIONS COMPANY, 1971 West 85th Street, Cleveland 2, Ohio
Plants at Cleveland and Kent, Ohio; Chicago and Birmingham

CAP AND SET SCREWS • SEMI-FINISHED NUTS • COTTERS • LOCK NUTS • STUDS • CLIP BOLTS

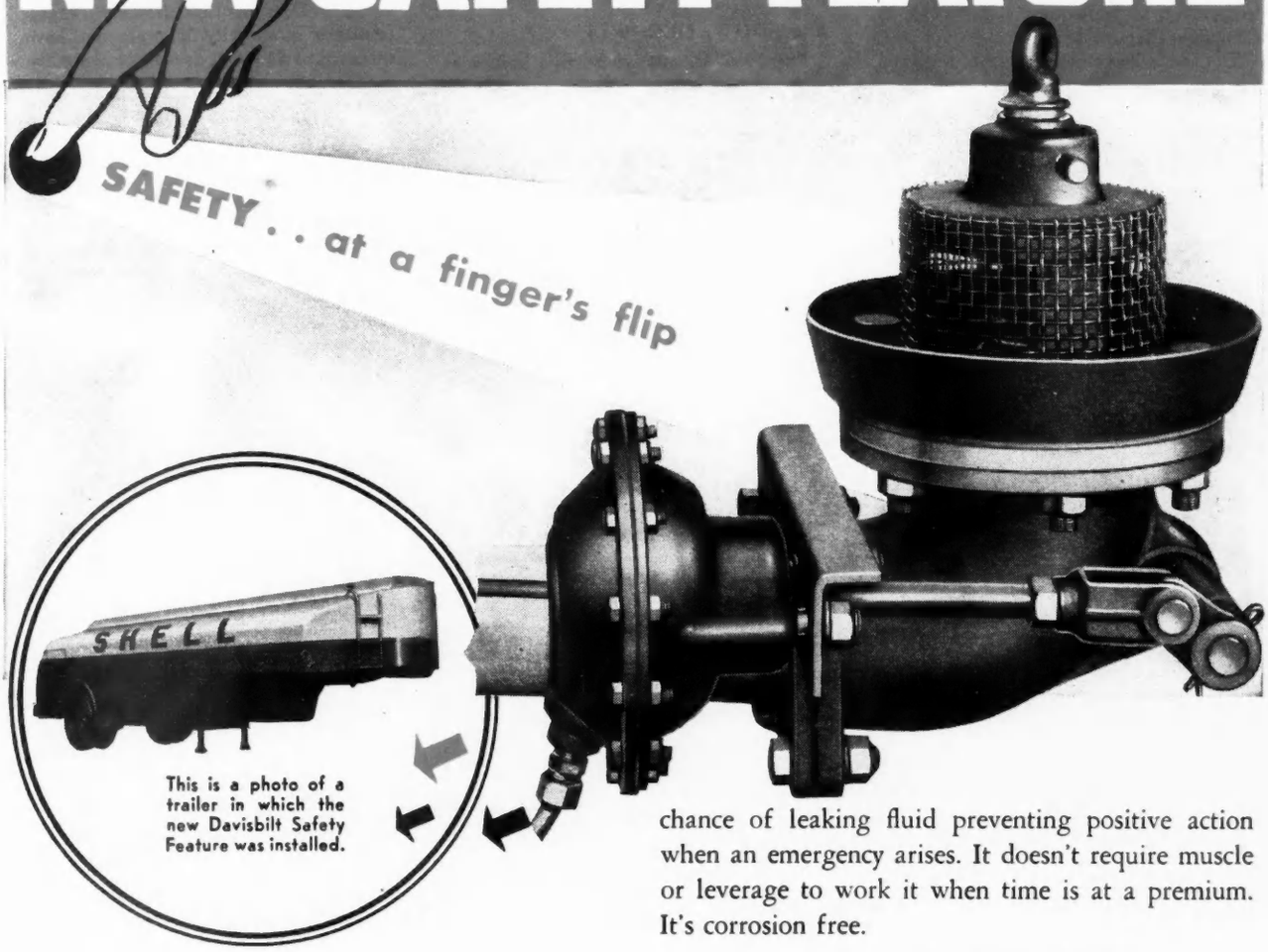
LAMSON & SESSIONS

Ask your Jobber for the Lamson Line

SPRING CENTER BOLTS • BATTERY BOLTS • LICENSE BOLTS • WASHERS • TRACTOR BOLTS • HI-NUTS

NEW SAFETY FEATURE

SAFETY . . at a finger's flip



This is a photo of a trailer in which the new Davisbilt Safety Feature was installed.

WHAT IS IT?

It is an air-operated emergency valve that is exclusively Davisbilt.

HOW DOES IT OPERATE?

With a little lever that requires only the flip of one finger to switch on or off.

WHY IS IT BETTER?

There are no cables to fray or break. There is no chance of leaking fluid preventing positive action when an emergency arises. It doesn't require muscle or leverage to work it when time is at a premium. It's corrosion free.

WHAT ABOUT MAINTENANCE?

It has ready accessibility, positive action and minimum maintenance. It is connected to the air supply that activates the brakes . . . no separate compressor required. . . special back-pressure valve insures minimum 65-lb. brake pressure . . . patented parts are interchangeable with standard Westinghouse operating diaphragm and control valve.

It's New! It's Better! It's Exclusively Davisbilt!

SPECIALISTS ENGINEERING IN DAVISBILT *THE FIELD OF FLUID CARRIERS*

THE DAVISBILT PRODUCTS COMPANY

FORMERLY THE DAVIS WELDING AND MANUFACTURING COMPANY

CINCINNATI, OHIO

CCJ NEWSCAST

(CONTINUED FROM PAGE 122)

INSURANCE RATES INCREASED

Truck bodily injury and property damage liability rate revisions on an upward scale have been announced by the National Bureau of Casualty and Surety Underwriters for 31 states and the District of Columbia effective March 11.

The revised rates represent the first change from reduced wartime emergency rates which were put into effect shortly after gasoline rationing and the federal commercial car operating restrictions went into effect. The revised bodily injury rates represent only a partial return to the pre-war level of rates, while the property damage rates are generally 15 to 25 per cent above pre-war level.

Similar changes will become effective in the remaining states where the casualty manual applies when rate filings have been accepted by the states.

ASI SHOW, DEC. 9-14

The 1946 Automotive Service Industries Show will be held at Atlantic City, N. J., December 9 to 14 inclusive. Space contracts will be mailed to eligible manufacturers within a few weeks, and no application for space should be made until they are received. The Atlantic City Convention Bureau has assured the Committee of ample hotel accommodations for the event.

ORDERS COMPLETE ACCOUNTS

The Interstate Commerce Commission has issued an order requiring Class I motor common carriers of property engaged primarily in intercity operation and having revenues of $400,000 or more, to keep more detailed accounts.

The new order, effective April 1, effects major changes in the ICC's Uniform System of Accounts. Under the order, the carrier is directed to keep its accounts and compile statistics which will permit it to report to ICC for the nine months ending Dec. 31, 1946.

It is stated, however, that "diversified" carriers who find it difficult to comply may obtain exemptions to the ruling.

VIRGINIA WEIGHT BILL KILLED

A legislative proposal for higher truck size and weight limitations has been killed by the Virginia Senate. The bill would have permitted use of combinations of vehicles up to 50,000 lb. gross weight on four or more axles over primary highways. It also would have permitted up to 35,000 lb. and 16,000 lb. axle load on secondary highways.

The present law permits a maximum of 40,000 lb. vehicle weight and 18,000 lb. axle weight on primary roads. It was contended in opposition to the bill that upward revision of the 40,000-lb. limit would endanger state roads.

CEILING PRICES SIMPLIFIED

Simpler and more precise methods have been established so that consumers may determine their ceiling prices for new trucks declared surplus by the armed forces and turned over for disposal in civilian channels, the Office of Price Administration has announced.

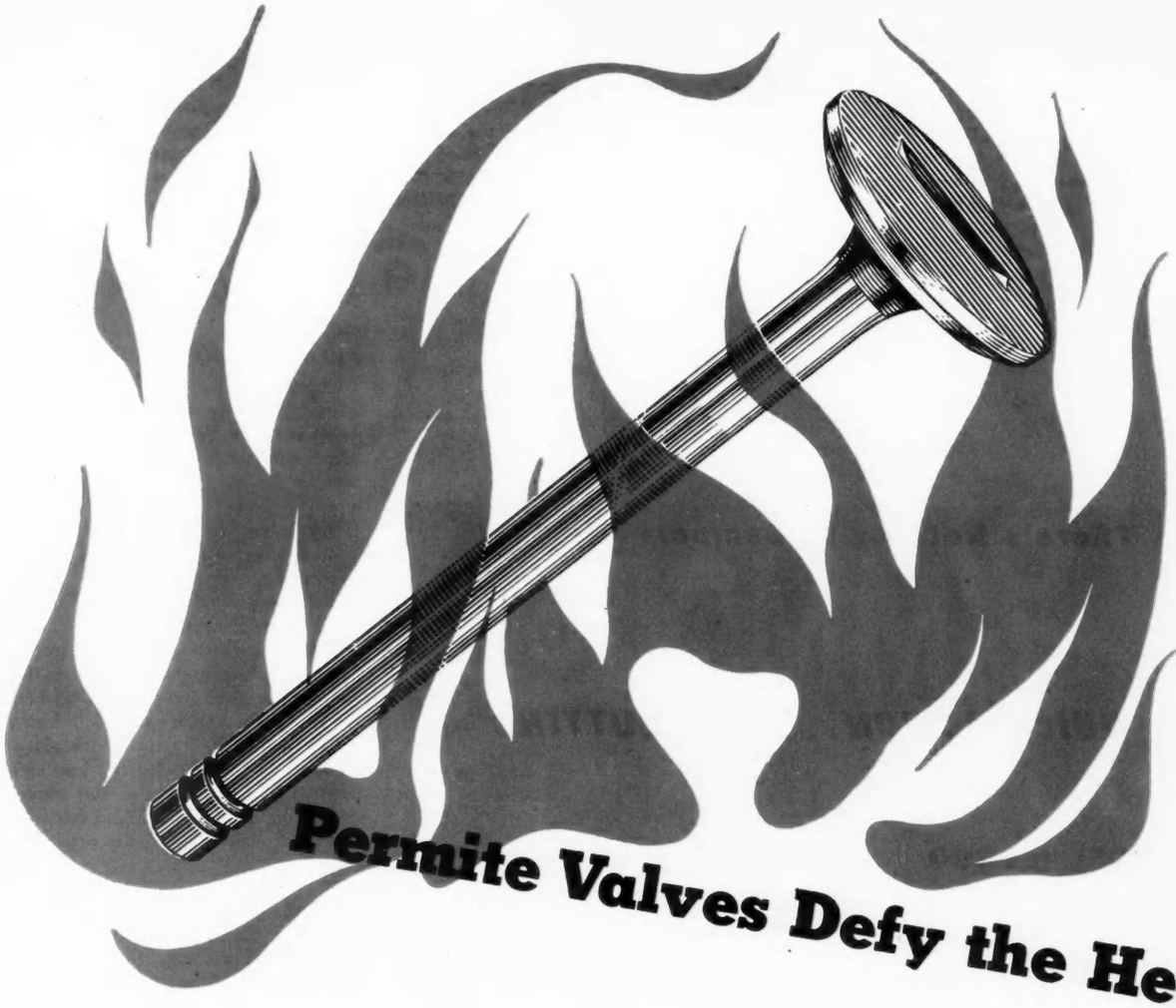
These methods, effective March 8, list exact margins and allowances which distributors and dealers are permitted to add to the prices they have paid the Government. Consumers will be able to check any attempts to ask more than the legal maximum prices.

The general level of resale ceiling prices for war surplus trucks is not changed by the new methods, OPA said. So far as consumers are concerned, the ceilings fall into two groups as follows:

1. Ceilings on resales to a consumer by a dealer who purchases direct from the Government disposal agency will be the Government's selling price plus (1) a mark-up of 33 per cent for vehicles up to 1½ ton capacity or 16,000 pounds gross weight and 42 per cent for all other vehicles; (2) a handling charge of $15 per vehicle; (3) a transportation charge of 10 cents per mile per vehicle from the point of Government sale to the dealer's place of business but not to exceed $100 per vehicle; (3) assembly charges, if assem-

(TURN TO PAGE 126, PLEASE)

for
fine
brake lining
KNOW
GRIZZLY
REG. U. S. PAT. OFF.
For thirty years, Grizzly has manufactured fine quality brake lining and, throughout these years, has kept alert to new developments in the brake lining field.
To know Grizzly means to gain knowledge of the results of these years of engineering development and research, knowledge of the modern, adequately manned Grizzly plants and knowledge of the dependability of Grizzly as a supply source for fine quality molded brake lining.
Fleet owners recognize the economy of Grizzly's lower cost per mile of service, service managers acknowledge Grizzly's ease of installation and astonishing freedom from adjustment and truck operators appreciate Grizzly's quicker, smoother stops.
"Bear in Mind"... ask for
GRIZZLY
REG U S PAT OFF.
BRAKE LINING



Permite Valves Defy the Heat

TWO different kinds of steel give Permite Bi-Metal Valves their extra durability for precision performance. The austenitic stainless steel of the valve head and upper stem stands up to the scorching heat of torrid gases. The hardenable chrome-nickel steel of the lower stem withstands the pounding wear that ruins ordinary valves.

Like all Permite Replacement Parts, Permite Bi-Metal Exhaust Valves are engineered to meet the rugged requirements of today's operating conditions. Heavier traffic, higher octane gas, the need for keeping old trucks, cars and buses operating efficiently – all call for parts of the highest dependability. To keep your fleets rolling with a minimum of time lost for repairs, see your nearest Permite Distributor for Permite Valves, Pistons, Water Pumps, Mufflers and other high-quality parts.

ALUMINUM INDUSTRIES, Inc.
Cincinnati 25, Ohio

PERMITE

REPLACEMENT PARTS

PISTONS	VALVE GUIDES	BOLT SETS	WATER PUMPS	MUFFLERS AND CLAMPS	CYLINDER SLEEVES
PISTON PINS	VALVE STEM KEYS	TIE-ROD ENDS	WATER PUMP REPAIR KITS	TAIL PIPES	WET SLEEVE ASSEMBLIES
VALVES	VALVE SPRINGS	BUSHINGS			

CCJ NEWSCAST

(CONTINUED FROM PAGE 124)

blies are made by the dealer, not to exceed $175 for trucks up to 2½ ton capacity and not to exceed $250 for all other trucks; and (4) state and municipal taxes, if any.

2. Ceilings on resales to a consumer by a dealer who purchases from a distributor will be the Government's selling price plus (1) a mark-up of 38 per cent for vehicles up to 1½ ton capacity or 16,000 pounds gross weight, and a mark-up of 47 per cent for all other vehicles; (2) a handling charge of $15 per vehicle; (3) a transportation charge of 10 cents per mile per vehicle from the point of the Government sale to the dealer's place of business but not to exceed $100 per vehicle; (4) assembly charges, where assemblies are performed by the dealer, or where the dealer is billed for assembly work performed by the distributor, not to exceed $175 for trucks up to 2½ ton capacity and $250 for all other trucks; and (5) state and municipal taxes, if any.

NEW ENGINE DEVELOPED

A new automobile engine of aluminum has been developed by Jack & Heintz, Cleveland, Ohio. The new unit is equipped with transmission and clutch for automotive use in the rear end, mounting less than half the usual weight. Its transmission and differential are in one piece. The engine is air-cooled, and cylinders are mounted horizontally. In recent factory tests the engine developed a peak horsepower of 95 miles per hour with ordinary non-premium fuel. The company states that the engine was run well over 1000 hours at speeds equal to 75 miles per hour road speed, consuming three quarters of the gas and oil required of the ordinary engine.

PLASTICS SHOW, APRIL 22-27

Hundreds of new plastic products and plastic parts, ranging from the latest developments in fabrics, home furnishings, office equipment, building materials and toys to the most modern in electrical devices, airplane and automobile parts and factory tools will be unveiled to the trade and general public at the first National Plastics Exposition, which will be held in Grand Central Palace, New York City, April 22 to 27, inclusive.

The Exposition, first ever held on a national basis, is sponsored by the Society of the Plastics Industry, 295 Madison Avenue, New York, and will bring together for the first time in one place and at one time all the industry's leading manufacturers of raw material and machinery, and companies that mold and fabricate the new and standard plastic products and product parts.

Products of interest to fleet men, among a great many others, will include heavy duty plastic upholsteries, stanchions, windshields and windows, ornamental trim, lighting fixtures, markers, directional signs, dashboard housings, etc.

More than two hundred companies will participate. On the first three days, only representatives of the trade will be admitted, but the general public may view the exhibits beginning Thursday, April 25.

GULF DEVELOPS NEW TIRE

Among the line of Gulf products recently placed on the market is a passenger tire having a new type of sidewall which is claimed to have greater resistance to cracking and bruising. The tread, flatter than the average tire, is said to provide more traction, less skidding and increased mileage.

Tested on taxi fleets recently, the Gulf tire showed a higher mileage than other makes, the company states, and a higher percentage of tires remained in satisfactory condition for recapping after the test. The tire is manufactured of GR-S110 synthetic rubber.

PHILCO MAKES RADIO PHONES

Philco Corpo., plans to produce ond sell a complete line of mobile radio-telephone equipment to provide dial telephone service in automobiles, trucks, buses and taxicabs as well as police and fire equipment.

Incorporating the Philco Advanced FM system and FM 1000 seven-element vacuum

(TURN TO PAGE 128, PLEASE)

Soft pressure does it . . .

You prolong engine life, step up engine performance and control oil when you install *Soft Pressure* Hastings Steel-Vent rings. With Steel-Vent "motor engineered" sets you're sure of good results in *any* cylinder condition—whether it's rebores, resleeves or extreme tapers.

HASTINGS MANUFACTURING COMPANY • HASTINGS, MICHIGAN
Hastings Ltd., Toronto

SOFT PRESSURE DOES IT —IN REBORES, TOO

This simple, straightforward statement from a garage foreman truly reflects the satisfaction of Steel-Vent users everywhere: "For the past six years we have used Hastings Steel-Vent sets in our trucks and passenger cars. We find them very satisfactory for stopping oil-pumping *and also in rebore jobs.* We intend to use them, and expect results, in the future as in the past."

HASTINGS STEEL-VENT
PISTON RINGS

TOUGH ON OIL-PUMPING GENTLE ON CYLINDER WALLS

CCJ NEWSCAST

(CONTINUED FROM PAGE 126)

tube, this mobile radio-telephone equipment will include many other important research developments in the field of electronics.

It is expected that with this equipment and the proper central station installations, the average motorist, bus, truck or taxi driver will be able to call his home or office, while driving along the highway, merely dialing the correct number.

AUTO PRODUCTION UNCERTAIN

The rapidity with which the automobile industry can make up the loss of 1,000,000 motor vehicles, sacrificed since V-J Day, depends upon the availability of materials, parts, and labor, a willingness to work, and the removal of production-deadening controls and regulations, George Romney, general manager, Automobile Manufacturers Assn., today told members of the Louisiana Automobile Dealers Assn.

The industry has set its sights on making up lost time, and an upswing in production is coming, Romney perdicted. Citing expert opinion that passenger car production would range between 2,000,000 and 3,000,000 units in the remainder of 1946, he said that any approach to the ideal goal of 3,320,00 cars and 750,000 trucks requires that "management, workers, suppliers and Government—most of all Government—must join hands and get going."

Optimism about the future, now that strikes in the automobile plants have ended, must be tempered by the knowledge of facts, the industry speaker reminded the dealers. The period of accelerating production to reach normal levels is still ahead, instead of having been completed in October, November and December as planned. Also ahead is the period of adjusting operations of thousands of suppliers, many of them operating very small companies, to the new wage-price plateau which Government has created for industry.

Romney declared that existing Government controls and other likely interferences may create successive drags, first here and then there, that will keep the automobile production curve ragged and unsteady. Because suppliers "have numerous balls and chains attached to them, their forward movement is likely to be fitful," he said.

TO OBSERVE AUTO ANNIVERSARY

America's automotive industry this spring will celebrate 50 years of progress in a Golden Jubilee event that will bring together many great names in the industry.

An industry event featuring a series of dramatic programs sponsored by the Automobile Manufacturers Assn. will take place in Detroit's Masonic Temple, May 31. A series of programs extending through the summer will be held by groups in various other sections of the nation.

EATON PURCHASES DYNAMATIC

The Eaton Mfg. Co., Cleveland, Ohio, has purchased all outstanding shares of Dynamatic Corp., Kenosha, Wis., manufacturers of eddy current and induction drive apparatus. This acquisition combines the activities of Dynamatic with those of Eaton Research Laboratories, which have been engaged in development work on the eddy current drive since 1940.

The eddy current drive is an electrical device which permits a more efficient operation of the various engine accessories by providing a practically constant selected speed regardless of variations in the speed of the vehicle engine of the load. Although the eddy current principle has been used in heavy-duty testing equipment, its application to the automotive appliance field is comparatively new.

FORD BUYS NORFOLK PLANT

The Ford Motor Co. has reacquisitioned its branch plant at Norfolk, Va., as a step in its $200,000,000 post-war expansion program. The modern plant located on a 45-acre tract near Norfolk was sold to the U. S. Navy in 1942 at government request. Approximately 2000 persons will be employed in the plant, assembling Ford cars and trucks.

(TURN TO PAGE 130, PLEASE)

contents

Refrigeration KNOW-HOW

The new Kold-Hold Catalog is a book of benefits and savings. It contains refrigeration know-how . . . information relative to the better storage and transportation of perishable products at lower costs. This catalog shows that Kold-Hold Serpentine Plate Type Evaporators have no equal in efficiency and dependability for locker plant space cooling, for shelves and stands in sharp-freezing or as cabinet liners, shelves or dividers. It explains how "Hold-Over" Plate Type Evaporators maintain the temperature of delivery bodies at the uniform level necessary in the successful transportation of fresh meat, ice cream, frozen foods and other perishables.

If you are interested in better storage and transportation of your products, write for this new free book of refrigeration knowledge today.

KOLD-HOLD

KOLD-HOLD MANUFACTURING COMPANY
620 N. GRAND AVENUE LANSING 4, MICHIGAN

for Power that Zooms in the spring..tra la!

● Get rid of winter-accumulated sluggishness —with Casite.

Casite tunes up older motors . . . restores smoothness and power. And it protects new motors during the critical break-in period.

Casite carries oil quickly to the tight spots . . . reduces formation of sludge and gum . . . cuts down engine wear . . . keeps motors clean and powerful.

For years, Casite has produced outstanding results for many of the largest fleets. Your own maintenance records will soon prove it pays to use Casite!

Use Casite in the crankcase every oil change and through the air intake of gasoline motors every three months—a pint for all passenger cars and small trucks; 10% of crankcase capacity for all others.

THE CASITE CORPORATION • HASTING, MICHIGAN

CASITE

WHAT CASITE DOES

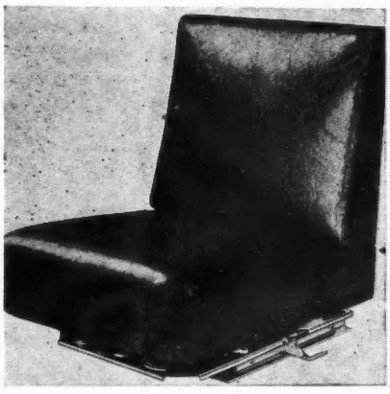
- Carries oil to the tight spots.
- Protects motor during break-in period.
- Reduces formation of sludge and gum.
- Frees sticking valves and rings.
- Gives Better and Smoother Performance all-year-around.

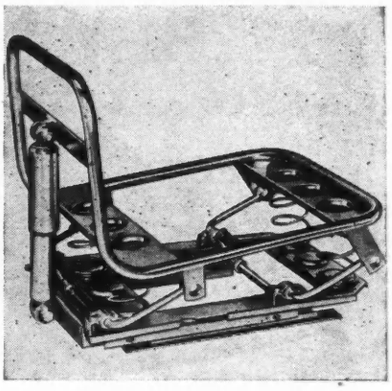
CCJ NEWSCAST

(CONTINUED FROM PAGE 128)

HYDRAULIC-SPRING SEAT FEATURES DRIVER COMFORT

A new design in truck seats has been made available to the industry by the Bostrom Mfg. Co., Milwaukee, Wis. The level-Ride Seat, Model 10, incorporates a hydraulically controlled spring system for smoothing shock and jolts and is equipped with a specially designed cushion for driver comfort. The support arms are mounted in automobile-type rubber bearings. Springs are of low-stressed, oil-tempered steel. The shock absorber is of the heavy-duty type. Steel yokes and tie rods are used in the construction. The frame is of tubular welded steel. The seat and back cushions are covered with vinyl resin fabric.





The hydraulic-spring seat is said to provide passenger car suspension under the truck driver's seat, cutting out 60 per cent rebound and preventing "bottom" jolts.

The new seat can be easily and quickly installed in any truck, according to the manufacturer. It has an adjustment of five inches fore and aft, for the short and long-legged drivers. The seat is 25¼ in. from front to rear and 25¾ in. high. Price in single lots is $64.75 F.O.B. factory.

TIVIT MOVES OFFICES

Tivit Products Co., has moved into new, expanded factory and offices in Los Angeles, Cal. Tivit, formerly located in Torrance, Cal., is a division of Kelite Products, Inc., and is engaged in the manufacture of steam cleaning machines, automatic car washers, radiator flusher, parts spray booths and other automotive equipment.

NIAGARA FRONTIER OFFICERS

The Trucking Federation of Niagara Frontier, Inc., elected the following officers at its annual dinner on Feb. 26, in Buffalo: President—C. P. Garvey, secretary and treasurer of P. J. Garvey Carting and Storage, Inc.; Vice-President—William H. Wilson, president of Wilson's Delivery and Carting Co.; Secretary—Gordon Tooley, district manager of Atlantic Coast Freight Lines, Inc.; Treasurer—Spencer Black, general manager of Robert Black and Sons.

The Trucking Federation of the Niagara Frontier is composed of the four major area associations; namely the Buffalo Van Owners, Common Motor Carriers, Buffalo Independent Movers and Truckers, and Buffalo Trucking Assns., Inc.

K-D ADDS NEW LINE

The K-D Lamp Co. has added Polarized sun glasses and the Willsonite line of sun glasses to its list of safety products now available to jobbers and dealers. Both type glasses are now available in a variety of styles, assortments and prices.

(TURN TO PAGE 132, PLEASE)

THESE

Miley Features

MEAN

LOW COST

Brake Operation

1 Miley "Black Gold" brake linings are guaranteed NOT TO SCORE brake drums—their safe, quick-acting, soft pedal action remains CONSTANT.

2 Miley is the only brake lining manufacturer today making a complete line of brake shoes for all popular cars plus all of Ford, Chevrolet, some G.M.C. and Dodge models of trucks.

Miley is a name to remember for SAFETY, low cost operation and long mileage. Guaranteed NOT to score drums.

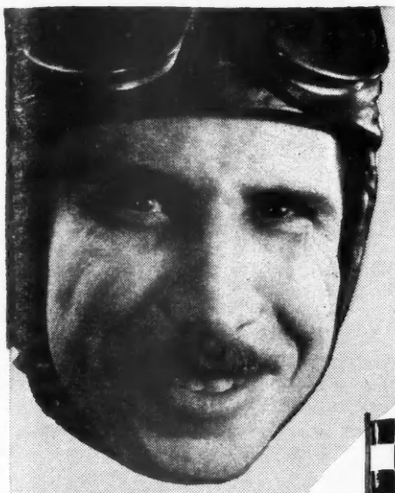
Write to Dept. C.

THE L. J. MILEY CO., INC.

1060 WEST ADAMS STREET

CHICAGO 7, ILL.

Plants in Chicago and N. Manchester, Indiana

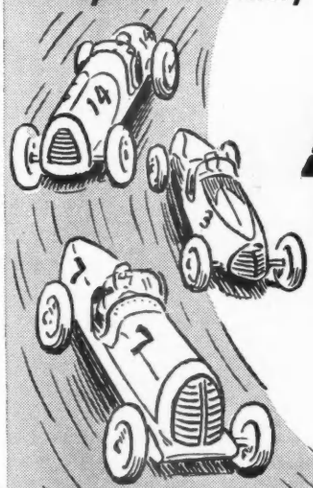


Behind the Wheel–MAURI ROSE
Under the Hood–BLUE CROWNS

...At the Indianapolis 1946 500-Mile Race

Co-winner in the 1941 Classic, Mauri Rose will compete again, in the first Memorial Day Classic since then — driving BLUE CROWN'S new 1946 Racer! Supertested in the laboratory, on the street and highway, in the great race — BLUE CROWN HUSKIES have earned the coveted confidence of this No. 1 driver.

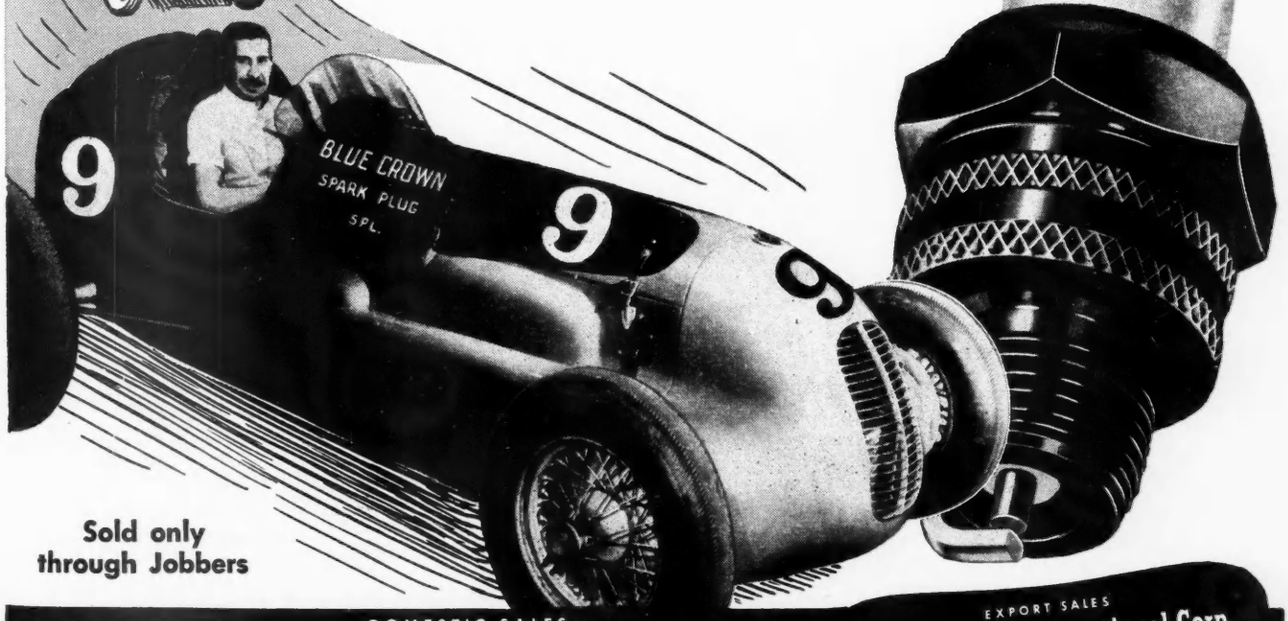
MAURI ROSE again seeks the Checkered Flag, the symbol of victory



BLUE CROWN HUSKY

SPARK PLUGS do a superb job for dealers, too

More talking points, more important features, better and longer service — make them sell faster and easier. And the Blue Crown dealer set-up yields a better, fairer profit margin.



Sold only through Jobbers

DOMESTIC SALES

BLUE CROWN SPARK PLUG CO.

a DIVISION of MOTOR MASTER PRODUCTS CORP.

1800 WINNEMAC AVENUE, CHICAGO 40, ILLINOIS

EXPORT SALES

Borg-Warner International Corp.

CHICAGO 4, ILLINOIS • U.S.A.

Cable Address "BORINTCO"

INTRODUCING . . . . .

★ . . . C. E. LOPEZ, as the new district manager in charge of Autocar Company's Albany, N. Y., area.

. . . HENRY J. HELFRICH, who has been named divisional sales manager of the Houde Engineering Division of the Houdaille-Hershey Corp., Buffalo, N. Y.

. . . JOSEPH DEL GRECO, representing sales for the K-D Lamp Co., in the states of Arkansas and Louisiana, and . . . J. P. YATES, as district sales manager for Southern California, Nevada, Arizona, New Mexico and the El Paso district of Texas.

. . . A. J. SHAW, who has been made manager of the West Coast District for the Carter Carburetor Corp., St. Louis, Mo.

. . . W. E. Henderson, newly elected vice president and director of Hall-Scott Motor Car Co., Berkeley, Cal. He also becomes acting general manager of the company

. . . Ralph B. George, who has been placed in charge of Fleet Sales for Trailmobile. He will operate from the factory at Cleveland, Ohio

. . . Dave B. Mallett, new manager of service equipment engineering for Federal-Mogul Service, division of Federal-Mogul Corp., Detroit, Mich.

. . . R. J. Nymberg, who has been named sales manager of the hoist and body division of Gar Wood Industries, Inc., Detroit, Mich.

. . . E. HEARN SIMPSON, as sales manager of the Alcohol and Camphor Section and manager of "Five-Star" Antifreeze sales for the Du Pont Co. of Wilmington, Del.

(TURN TO PAGE 135, PLEASE)

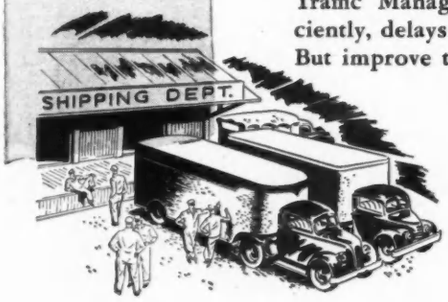
WHOSE FAULT IS IT When a Truck Wastes Time?

Well, It Isn't Always the DRIVER'S

—There are some delays he can't control, such as waiting for the load.

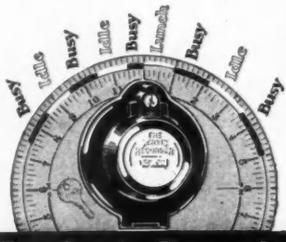
✱ The tendency used to be to blame the driver. "Frank must've stayed too long in that coffee joint down the road, arguing politics"; or—"When Andy stopped in Joe's Place for a coke, I'll bet he loafed around listening to the juke box."

BUT—*much of the idle time of a truck is due to the OFFICE!!* Take the Shipping Dept.—if it doesn't make the morning load ready *early,* the truck doesn't get away *promptly.* Take the Traffic Manager—if he doesn't route it efficiently, delays at traffic bottlenecks may result. But improve the office system and several expensive trucks increase their running time an hour a day!



Only when you find out *when* the delays occur and for *how long,* can you go after the *cause.* Install *Servis Recorders* —their charts show up *all* delays—idle time can't be hidden. Write for the full story. The Service Recorder Company, 1375 Euclid Avenue, Cleveland 15, Ohio.

IDLE!
A Whole Hour Lost
Because the morning load wasn't Ready!



The Servis Recorder
The Good Driver's Best Friend

INTRODUCING . . .

(CONTINUED FROM PAGE 132)

. . . HENRY HUSBANDS, recently named assistant district manager in the Washington area for Gar Wood Industries, Inc., of Detroit, and . . . ROSS MILLER, district manager—general line, who is acting temporarily as manager of Gar Wood's Philadelphia branch. He succeeds A. E. HILDERLEY, retired. . . . EDWARD F. KREUTSFELD, who has been named service manager of the hoist and body division to succeed Mr. Miller. . . . WILLIAM F. KEETON, as head of the company's newly-created advertising department.

. . . Stonewall Jackson Warner, Jr., new assistant manager of the Atlanta Division of the Ethyl Corp.

. . . Francis S. Nickerson who has recently been appointed Baltimore district manager for the Mack-International Motor Truck Corp.

. . . Jack Mohr, who has been appointed division sales manager for the Midwestern Division of Wausau Motor Parts Co., Wausau, Wis.

. . . Howard K. Lang, newly appointed sales manager for the Toledo Steel Products Co., Toledo, Ohio

. . . A. L. Rice, recently appointed Trailmobile branch manager at Newark, N. J., for the Trailmobile Co., Cincinnati, Ohio

. . . L. M. Olson, newly elected vice president in charge of the "Whiz" Automotive Division of the R. M. Hollingshead Corp., Camden, N. J.

. . . F. E. JAMES, as assistant to the chief engineer of the Mack Mfg. Corp. He will be in charge of Mack's fire apparatus engineering.

. . . Clarence B. Bull, newly appointed general manager of Transportation Sales for the Sherwin-Williams Co., Cleveland, Ohio

. . . PAUL W. ZUMBROOK, who has been named manager of Domestic Lubricating Oil Sales of Sinclair Refining Co.

(TURN TO NEXT PAGE, PLEASE)

A Complete Line
1/4 H. P. to 10 H. P.
PACKAGED
Units of Power
"Wayne Honest Measure"
for your protection
EASY TO EXPAND AIR FACILITIES
THERE'S a Wayne "Packaged Unit" in the size and type you need to replace your old worn-out compressor . . . or augment your air supply for additional air tools. Wayne Compressors are all Wayne built . . . . backed by Wayne's Guarantee and Nation-wide Service Organization! Ask for catalog.
THE WAYNE PUMP COMPANY
FORT WAYNE 4, INDIANA
WAYNE AIR COMPRESSORS

INTRODUCING . . .

(CONTINUED FROM PAGE 135)

. . . BURTON L. BUGBEE, who has been appointed district represtative for the Auto-Lite Battery Corp., with headquarters in Buffalo, N. Y.

. . . CARROLL AGRELIUS, as the new regional manager in charge of the newly reorganized Salt Lake City area for Kelite Products, Inc., of Los Angeles.

. . . Herman P. Shade, formerly vice president and general sales manager of Arrow Safety Devices Co., heading the new automotive division of the Grote Mfg. Co., of Bellevue, Ky. Eric H. Shade, right, becomes assistant sales manager

. . . C. H. WEES, who is the newly appointed manager of the Fruehauf Trailer Co. in Richmond, Va.

FRANK IS WARD LaFRANCE G.M.

Albert A. Frank has been appointed vice president of Great American Industries, Inc., and general manager of Ward LaFrance Truck Division, Elmira, N. Y. A. Ward LaFrance, founder of the company, has retired from active management of the division.

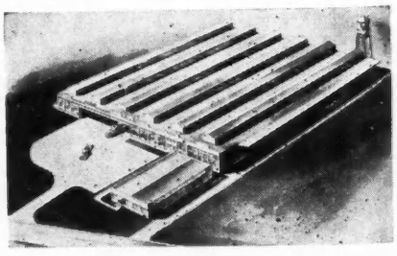
M. R. Colgan, former district manager of ODT's highway department, has been added to Reo Motor's regional staff in Boston as special representative in Massachusetts

R. C. PETER TRANSFERRED

R. C. Peter is being transferred, effective April 1, as technical representative in automotive finishes from the Wilmington, Del., home office, E. I. du Pont de Nemours & Co., to the Toledo, Ohio, area.

He will be connected with the Du Pont Automotive Finishes office in the General Motors Building, Detroit, but will reside in Toledo.

(TURN TO PAGE 138, PLEASE)



Kenworth's new plant, located on Marginal Way in Seattle, provides greatly increased and improved space for the manufacture of Kenworth trucks and buses. In this artist's conception of the big factory, the new office building now under construction is shown at front of the main structure. Present plans call for all Kenworth's production and service departments to be established in the new plant by June 1

"You can't fight a CRASH fire with GASOLINE!"

• • •

The Ability to "Take It" in case of Crash and to Withstand High Rupture Pressure in Case of Fire are Two Major Requirements of True Safety Fuel Tanks for Commercial Motor Vehicles!

• • •

AMERICAN SAFETY TANKS have exclusive safety features NOT found elsewhere

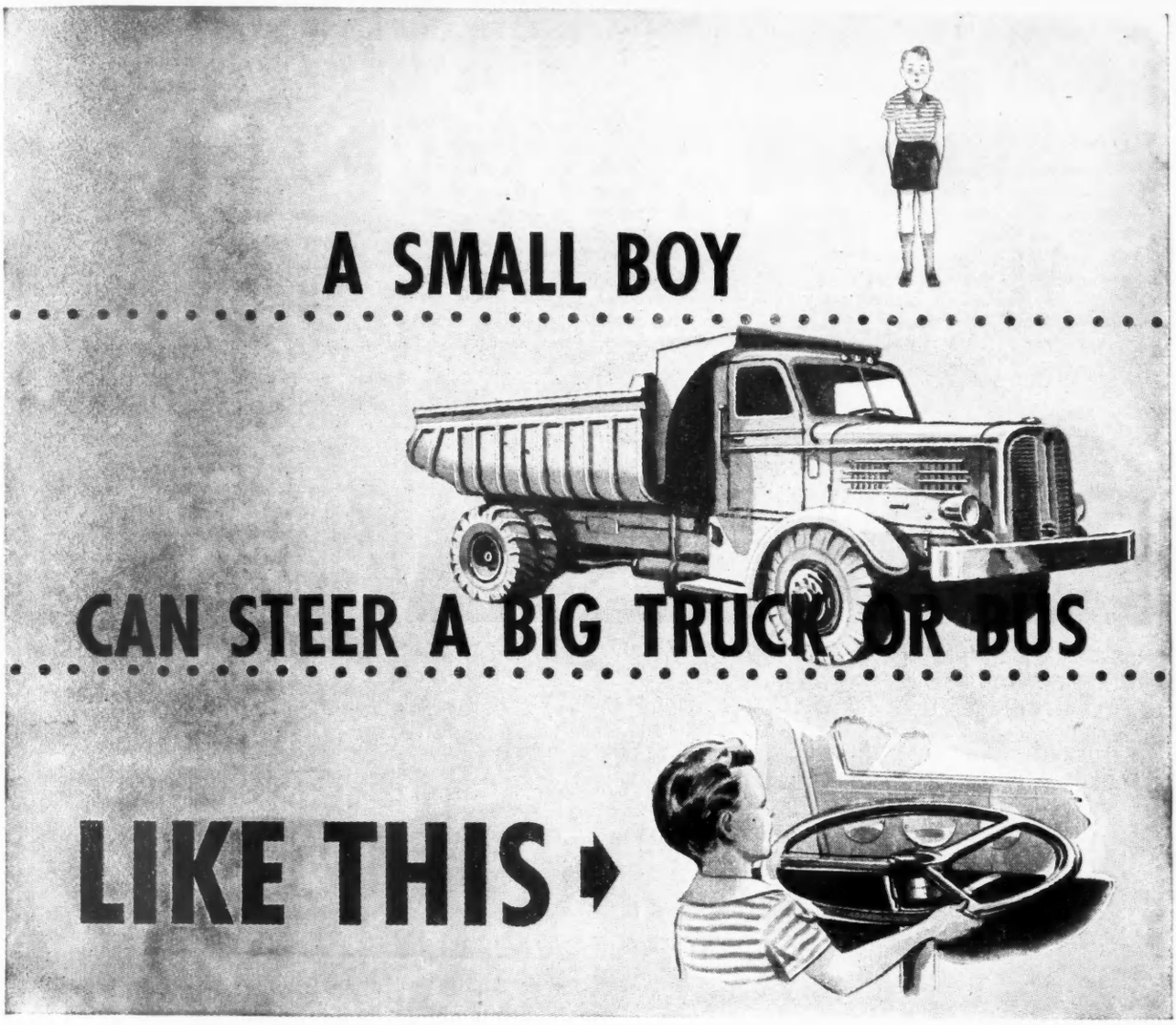
WRITE FOR DETAILS

American Safety Tank Co.

UNDERWRITERS LABORATORIES, INC., A. U., 1302

U. S PAT. NOS. 2090197 & 2268697

KANSAS CITY 8, MISSOURI, U. S. A.

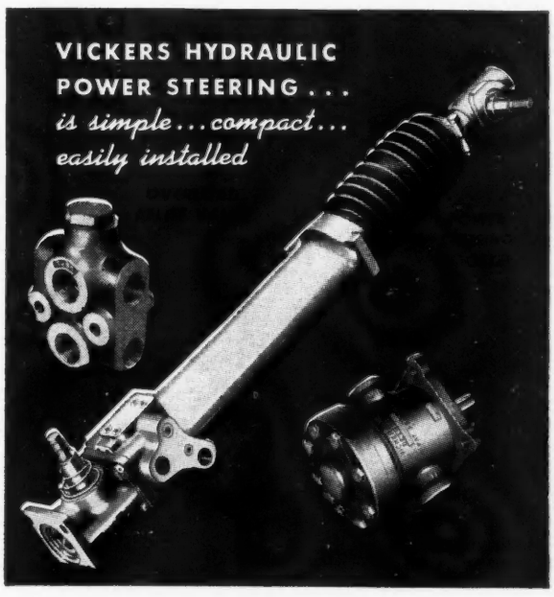


with VICKERS Hydraulic POWER STEERING

We don't expect a small boy to drive a big truck or bus, but his strength is many times equal to the steering effort required if the vehicle has Vickers Hydraulic Power Steering. The steering wheel turns with effortless ease, and the front wheels always follow *exactly*.

Moreover, no matter how rough the ground, no road shock can get to the driver. The steering wheel cannot spin, or jerk—the vehicle can be driven over the curb or through sand with no "fight" from the wheel. A flat tire will not cause swerving. The driver is relieved of the most fatiguing part of his job—enabling him to work faster and longer with greater safety.

Vickers Hydraulic Power Steering is simple, compact, easy to apply to existing chassis designs. It has automatic protection against abuse and excessive steering reaction forces. Lubrication is automatic. Fifteen years of successful operating experience on trucks, buses, road machinery, etc. have proved the value of Vickers Hydraulic Power Steering. Write for Bulletin 44-30.



VICKERS *Incorporated*

1418 OAKMAN BLVD. • DETROIT 32, MICHIGAN

Application Engineering Offices: CHICAGO • CINCINNATI • CLEVELAND • DETROIT
LOS ANGELES • NEWARK • PHILADELPHIA • ROCHESTER • ROCKFORD
TULSA • WORCESTER

CCJ NEWSCAST

(CONTINUED FROM PAGE 136)

NATIONAL CYLINDER CATALOG

The Technical Service Department of National Cylinder Gas Co., Chicago, Ill., has issued an illustrated circular covering the "how to" on the cutting of cast iron with the oxy-acetylene flame. Included is discussion of proper types of equipment, preheating conditions, cutting positions, need of adequate protective clothing, proper oxygen and acetylene pressures, etc.

REEFER TRUCK INDUSTRY GIRDS TO MEET NEW GOALS

Manufacture of thousands of mechanically refrigerated trucks and trailers is being pushed to meet initial demands in what may well become the greatest era of expansion in the history of the motor transport industry.

These "mobile refrigerators" are needed at once, not only to keep pace with the unprecedented boom in frozen foods, but to provide larger and more modern facilities for transporting fresh foods of all descriptions from their sources directly to market.

In both cases, according to the Refrigeration Equipment Mfrs. Assn., food producers, processors and distributors, trucking leaders and refrigeration engineers alike are striving to take immediate advantage of the progress made in mobile refrigeration facilities during the war and in the period since the war ended.

While truck and trailer manufacturers are using many means of cutting the weight of their vehicles through changes in design and construction, the refrigeration industry also has reduced the weight of its units by employing advanced engineering and new materials, REMA pointed out. The net result of both endeavors is to greatly increase payloads.

At the same time, more efficient refrigeration equipment—much of it patterned after the Army's highly successful mobile "reefers" used to haul fresh foods to the fighting fronts—is being combined with better insulation and sealing of the sidewalls, floors and roofs of truck and trailer bodies to give improved refrigerating results for the larger cargoes over longer hauls.

One of the recently reported results of this progress was the transportation of a load of 30,000 lb.—15 tons—of fresh mackerel from New Bedford, Mass., to the Fulton Market in New York. It was the maiden trip of a new type of eight-wheel, tandem axle, insulated 28-foot trailer equipped with a self-contained refrigerating unit. The mackerel arrived ocean-fresh, and the truck-trailer made the return trip immediately.

Spokesmen of the refrigeration industry point to the growth of the frozen food business as ample indication of the needs for mobile transportation in that direction. Economists, they declare, estimate that frozen food consumption in the United States increased 520 per cent from 1936 to 1943. It is predicted that within 10 years the volume of frozen food sales will reach 11 billion dollars annually with 65 per cent of all perishable foods preserved by freezing.

In the few months since the end of the year, improvements already have been made on the design and construction of the units called "reefers" by the Army Quartermaster Corps. In their war-time use, these units frequently were 10-ton trailers, pulled by truck-tractors to points behind combat areas called communications zones. Collapsible refrigerated units of 600, 1800 or 4300 cubic feet were loaded in the trailers, removed in the communication zones, and dispatched in smaller trucks to desired destinations.

This efficiency can be taken as an indication of what may be expected in comparable peacetime operations, REMA officials declare.

(TURN TO PAGE 144, PLEASE)

YANKEE YANKEE YANKEE YANKEE YANKEE
MIRROR MAGIC?
NO! NOT WHEN YOU KNOW HOW!
Feats of magic always require consummate skill—painstaking attention to details—years of experience.
Making YANKEE Automotive MIRRORS requires the same magical skill—the same perfecting details—born of more than a quarter of a century of experience. It's therefore no mere accident that YANKEE MIRRORS provide high fidelity vision — without tricky illusions — without distortion. No wonder YANKEE MIRRORS have always been the finest in the world — the finest that money can buy!
NO. 241 REPLACEMENT MIRROR HEAD. Made to fit the No. 245 Telescopic Adjustable Mirror
NO. 245 TELESCOPIC ADJUSTABLE MIRROR. Adjustable to any position. For Universal mounting on Trucks & Buses
YOU'RE SAFE WHEN YOU CAN SEE with
TRADE MARK
YANKEE
REG. U. S. PAT. OFF.
You'll always find them packed in the familiar Red, Yellow and Blue package.
TRAILER AND TRUCK MIRROR
ASK YOUR JOBBER SALESMAN
REFLECTORS
DIRECTIONAL SIGNALS
CLEARANCE LAMPS
CONVERSION KITS
YANKEE METAL PRODUCTS CORP., NORWALK, CONNECTICUT, U. S. A.

RUST-CHOKED RADIATORS CAUSE COSTLY REPAIRS

CLEAN RUST OUT

with

DU PONT Cooling System CLEANSER

A rust-clogged cooling system can cause plenty of trouble and needless expense. That's why you should use DU PONT COOLING SYSTEM CLEANSER every spring and fall. It dissolves rust and scale—cleans thoroughly without reverse flushing. Just pour it into the radiator, run the engine for an hour or more, and drain. It won't damage the hose, packing or metal parts. Do the job now and insure against overheating this summer.

KEEP RUST OUT *with Du Pont Acid and Rust* INHIBITOR. After cleaning out the cooling system, you can keep it free from rust and acid all season by putting in Du Pont Inhibitor.

PREVENT LEAKS *with Du Pont Cooling System* SEALER. It stops leaks, and prevents new leaks forming. Just pour it into the radiator. Won't clog the passages or harm the parts.

DU PONT
REG. U. S. PAT. OFF.

NO. 7 LINE

BETTER THINGS FOR BETTER LIVING . . . *THROUGH CHEMISTRY*

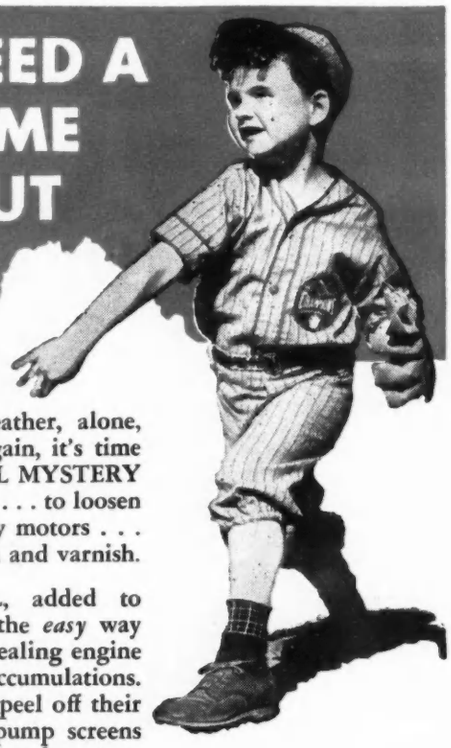
TRUE OR FALSE ?

CEILING PRICES FOR USED 1946 TRUCKS ARE 103 % OF THE NEW VEHICLE LIST PRICES.

☐ TRUE ☐ FALSE

Answer on Page 142

MOTORS NEED A SPRINGTIME WORKOUT TOO!



Winter driving leaves truck motors full of mechanical charleyhorses . . . warmer weather, alone, won't work them out. Once again, it's time to rely on dependable MARVEL MYSTERY OIL to do an *inside* job for you . . . to loosen stiff joints in your winter-weary motors . . . to get rid of deep-rooted sludge and varnish.

MARVEL MYSTERY OIL, added to crankcase oil and gasoline, is the *easy* way to *thoroughly* dissolve power-stealing engine gums. It also retards further accumulations. Lazy rings and sluggish valves peel off their sticky coats . . . oil lines and pump screens benefit instantly. The vital flow of protecting lubricant is properly restored. Immediately, motor wear goes down while performance picks right up.

Your motors deserve more than just an oil change to get set for that switch from winter into summer. Give 'em a real internal workout by adding MARVEL MYSTERY OIL, too. Order from your jobber, today! EMEROL MANUFACTURING CO., Inc., 242 West 69th St., New York 23, N. Y.

MARVEL MYSTERY OIL

MARVEL MYSTERY OIL HONESTLY SO

1946 STUDEBAKER

(CONTINUED FROM PAGE 110)

selector and aluminum alloy tin-plated pistons.

A gasoline-saving overdrive transmission with steering post gear shift lever is available along with an optional four-speed transmission. Other options include hill holder, dual horns, rear bumper, heater and radio.

The color range covers gray, tan, blue, green, and black, with fenders to match.

One-ton—Pick-up and stake models. The Coupe Express pick-up model carries an 8-ft. body and the stake model, having a longer wheelbase, a 9-ft. body. Gross vehicle ratings are 7800 lb and 10,000 lb respectively. The Coupe Express comes with six-ply 7.00x17 and the stake model with eight-ply 7.50x17 front and single rear tires, with larger sizes and dual rears optional. These units are marketed complete with bodies, as chassis-and-cab, or as chassis only.

Both units are powered by the Econ-o-miser engine and equipped with heavy-duty, full-floating axles. The all steel, three-man cabs have the same comfort features as the ½-ton pick-up. The stake model has auxiliary rear springs and the pick-up has shock absorbers as standard chassis features.

Colors for the 1-ton pick-up include gray, tan, blue, green and black, and red or green for the stake model. Fenders to match are furnished with both units.

Optional 1-ton equipment includes hill holder, dual horns, heater, and radio with the addition of auxiliary rear springs for the pick-up and front and rear shock absorbers for the stake model. Early cut-in generators are also available.

One and one-half-ton—A choice of three wheelbases with a maximum gross rating of 13,500 lb when supplied with standard heavy-duty rear axle and 15,000 lb when supplied with optional two-speed rear axle with power shift. In tractor-trailer service the maximum gross ratings are 22,000 lb and 24,000 lb respectively.

The M16-28 takes a 9-ft. body, the M16-52 a 12-ft. body and the M16-95 an 18- to 20-ft. school bus body.

(TURN TO PAGE 142, PLEASE)

Now—EVERY-TRIP Alinement Check-ups at a Glance!

If an *occasional* alinement check-up helps keep you from paving streets and roads with your rubber, then an *EVERY-TRIP Check-up* is that much better—and now you can have Every-trip Check-up as easily as glancing at your watch.

As you see in the picture, the gauge on this easy, simple Bear Wheel Aliner is eye-high for the driver. All he does is roll on, glance at the dial, and that's all there is to the Every-trip Check-up.

And remember, this isn't an ordinary alinement check, but the only absolutely accurate toe-in and toe-out check that can be made! For this is the only check made under actual driving conditions with and without load—the only front and rear wheel test where the vehicle is IN MOTION!

Make a Deal With Your Bear Service Man

Your nearby Bear Service Man will be glad to arrange for your vehicles to roll over his Bear Wheel Aliner for Every-trip Check-up. Or, get UP-TO-DOUBLE tire mileage with Bear Aliners of your own, installed at your terminal points. Write today for complete details to BEAR MFG. CO., Dep't. CCJ, Rock Island, Ill.

Dial on drive-over side is easily visible for the driver. It shows exact condition of alinement and indicates amount of side-scuff per mile.

Heart of Tire and Vehicle Conservation Is

BEAR ***Wheel Alinement and Dy-Namic Balancing***

1618

Large, modern plant under construction at Coldwater, Mich., for Federal-Mogul Service, division of Federal-Mogul Corp., manufacturers of engine bearings. The new plant will house the administrative offices, the master stock, cataloging services and all operations related to sorting and shipping stock

THIS
SAF-T-STEP
makes the job faster..easier!
No more dangerous and exhausting jumps or climbs when you load and unload! With Saf-T-Step you walk up to your truck bed with the load you carry adjusted for ease and minimum strain. Saf-T-Step cuts fatigue in half and makes the job go faster. Constructed to carry a 1000 pound load Saf-T-Step has a special non-skid feature on step treads. Saf-T-Step is available in 2 models, designed for side or rear mounting and fits most flatrack, stakebody, van trailer or "semi" bodies with custom-like precision.
SAF-T-STEP IN ACTION!
OR THIS
Inset shows Saf-T-Step in closed position. Folds directly under truck bed, has easy . . . finger-tip release that drops the step into working position automatically.
WRITE FOR DETAILS
SAFETY STEP SALES CO.
1017 S. La Brea Ave. Los Angeles 35, Calif.

1946 STUDEBAKER

(CONTINUED FROM PAGE 140)

All models mount eight-ply 7.00x20 front and dual rear tires as standard, with larger sizes optional.

Powered by the Studebaker Hy-Mileage six-cylinder engine, these vehicles have massive channel frames more than eight inches deep, with six to eight cross members. A four-speed transmission is standard. Numerous comfort and safety features have been incorporated.

Optional equipment includes heavy duty front and rear springs, booster brake, booster brake and reserve tank, engine governor, 19-plate battery, early cut-in generator, fish-plates, Tru-Stop brake, shock absorbers, and hill holder. Colors are red or green, with black fenders and running gear.

All models built by Studebaker for 1946 will have the following tested features: Fram oil filter, oil bath air cleaner, automatic spark control, thermostat, single plate dry disc clutch, cam and twin lever steering, air cooled shunt wound hi-output generator, automatic manifold heat control, reverse-Elliot front axle, drop forged heat treated crankshaft, full pressure lubrication, high velocity centrifugal water pump, and many others.

END

(Please resume your reading on P.112)

Goodrich Offers Folder

A new folder on its gasoline hose and fittings has been published by the B. F. Goodrich Company, Akron, Ohio, and is now available upon request. The folder describes and pictures the operating advantages of its tank truck hose with oil and gasoline proof synthetic rubber tube and cover, as well as all the fittings needed for its use.

● TRUE OR FALSE?

ANSWER . . . (To Question on P. 140)

True, When sold on a warranted basis, the ceiling price of a 1946 used truck is 103 per cent of the list price when new. The list price, though, is lower than the delivered price, which excludes taxes, transportation and handling and preparation costs.

(Another Cartoon Quiz on P. 144)

"Mileage means *money* to us!"

M. L. ADLEY, Treas.
Adley Express Co.
New Haven, Conn.

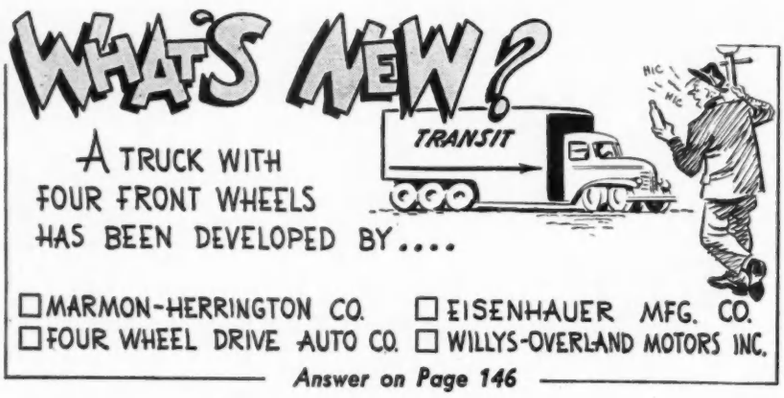
"Our East Coast operation of 400 highway carriers traveling over 500,000 miles per month and hauling some 12 million pounds per week, requires careful estimating and cost accounting. For the past 25 years our records proved Armstrong Tires are economical and dependable. I am now looking forward to an even better Armstrong Tire to aid us in reducing operating costs . . . mileage means money to us."

SINCE 1912 hundreds of commercial car operators have learned that *you can't buy a better tire than an Armstrong!* For years, we have pioneered in making tires that wear longer and cost less. You can count on an Armstrong to give you a tire that will perform better, last longer, stand up under all conditions and cost you less per mile of use! That's not a statement—it's a promise, a promise backed by the thirty-year integrity of the manufacturer.

For literature or information write your Armstrong distributor or to Armstrong Rubber Company.

ARMSTRONG TIRES

Manufacturers of Quality Tires and Tubes Since 1912 · General Offices and Plant—400 Elm Street, West Haven 16, Conn.


WHAT'S NEW?
A TRUCK WITH FOUR FRONT WHEELS HAS BEEN DEVELOPED BY....
TRANSIT
☐ MARMON-HERRINGTON CO.
☐ EISENHAUER MFG. CO.
☐ FOUR WHEEL DRIVE AUTO CO.
☐ WILLYS-OVERLAND MOTORS INC.
Answer on Page 146

A VELVET LIKE FINISH IS PRODUCED WITH A FEATHER LIKE TOOL

CORRECT BALANCE
CORRECT WEIGHT
CORRECT DESIGN
CORRECT SPEED

Thirty years manufacturing experience has made it possible for K-O Engineers to give you these four all-important features in a Valve Seat Grinder. These four determining factors are what an experienced mechanic looks for in a Valve Seat Grinder. They're all found in a Knock-Out Grinder.

It doesn't take a master mechanic to produce a velvet-like finish on valve seats. A mechanic with little experience can do it with ease and accuracy when using a K-O Grinder and K-O Stones.

"Knock-Out" UTILITY VALVE SEAT GRINDERS

are conveniently packed in a handy Tool Chest. This tool will prove to be one of the most worth while and most profitable in any shop. Not only is it built to grind valve seats but also for:

Carbon removing — Abrasive disc grinding
Tool post grinding — Misc. hand grinding

and for many other frequent and worth while grinding jobs around a shop.

MODEL P302 UTILITY VALVE SEAT GRINDER

SEE YOUR "K-O" JOBBER OR WRITE TO
K.O. LEE COMPANY, ABERDEEN, S. D.
Manufacturers of Fine Tools for Over Thirty Years

CCJ NEWSCAST

(CONTINUED FROM PAGE 138)

PLASTIC INSULATING MATERIAL

Development of a new foamed plastic so light that a woman can balance four cubic feet on the fingertips of one hand, and yet so strong that luggage made with it as a core will support a man's weight has been announced by the du Pont Co., Wilmington, Del.

Called cellular acetate, the new plastic is envisioned for use in light weight structures as well as the core material for the bodies of refrigerated trucks. The thermal insulating properties of cellular celulose acetate are virtually the same as cork, yet the plastic is lighter than cork.

The plastic is now made in strips 3.5 in. wide, ⅝ in. thick as of any desired length. The strips may be bonded with ease to metal, wood or other plastic. It may be tooled or shaped with any wood-working machinery.

BROCKWAY OF CROWN, DIES

Don M. Brockway, founder and president of the Crown Body & Coach Corp., passed away in Los Angeles on February 17. Mr. Brockway organized the Crown Carriage Co. in 1903 and manufactured carriages and commercial horse-drawn vehicles. Under Mr. Brockway's leadership the organization merged into the exclusive manufacture of the Crown Super Coach, and became the distributor for Wayne School Bus Bodies in the Southern California area.

CHARLES VAN NORMAN DIES

Charles E. Van Norman, Chairman of the Board of the Van Norman Co., died at his home in Springfield, Mass., on Feb. 28. Mr. Van Norman, 86, became president of the company in 1912 and occupied this position until 1940, when he became Chairman of the Board.

HEIL OFFERS BULLETINS

The Heil Co., Milwaukee, Wis., has made available to the industry four new bulletins on Heil Bodies and Hoists. These bulletins cover up-to-date information and photographs on heavy-duty dump bodies and twin cylinder hydraulic telescopic hoists, twin arm hoists for heavy-duty trucks and for 1½ to 2½-ton trucks, and platform conversion hoists.

FILM CATALOG AVAILABLE

A new catalog listing training films available to the industry is now offered by Castle Films, Inc., New York City. The catalog contains a complete list of all U. S. Government 16 mm. sound films and 35 mm. filmstrips. The list includes training films and other types of educational films produced by the Navy, War Department, Dept. of Agriculture and U. S. Public Health Service.

(TURN TO PAGE 146, PLEASE)

AUSTIN

THE ACCEPTED STANDARD

ALWAYS UNDER THE LOAD

NEW AND IMPROVED CONSTRUCTION FEATURES

1. Positive and Selective two speed transmission for optional rapid traverse or load lifting purposes. Theoretical lifting ability 18,000 pounds.

•

2. Sturdy leg construction plus rear angle bracing and inside diagonal bracing provide maximum load supporting ability and resistance to coupling shocks.

•

3. Self-equalizing trucks with live rubber cushions permit dual wheels to adjust themselves to ground irregularities for equal load distribution. This exclusive Austin feature prevents the possibility of leg distortion and binding. Result — Austin Safe-T-Props will operate easily under all service conditions.

•

4. Heavy duty, heat treated, precision-cut lift screw promotes longer life, and reduces frictional resistance to a minimum. "Full floating" compensating lift nut prevents leg binding when subjected to heavy strains.

•

5. Bevel cut gears and lift screw are equipped with Timken combination radial and thrust tapered roller bearings.

•

6. Torsional anti-friction ball key and ball channel, maintain positive wheel alignment and further reduce manual operating effort.

•

7. Design and construction permits easier accessibility to all functional members for economical servicing. Alemite pressure fittings are provided for all essential parts requiring periodic lubrication.

•

8. All working parts are fully enclosed and protected.

Write for Descriptive Literature

Dependable Performance — performance nationally recognized by truck owners and operators — has made Austin Safe-T-Props the accepted standard of the trailer industry. Today, tens of thousands of Austin Safe-T-Props are in service under trailers operating over the nation's highways. As standard equipment on heavy duty ordnance cargo trailers Austin Safe-T-Props have proved their ability to take "off-the-highway" punishment. Always under the load, you can rely on Austin's dependable and efficient trouble free service for maximum operating economy.

Austin Parts-Service is Nationwide
See Your Nearest Trailer Distributor

AUSTIN TRAILER EQUIPMENT COMPANY

ENGINEERED TRUCK AND TRAILER PRODUCTS

MUSKEGON, MICHIGAN

CCJ NEWSCAST

(CONTINUED FROM PAGE 144)

BOWERS CATALOG AVAILABLE

A new 20-page spark plug catalog is being offered by the Bowers Battery and Spark Plug Co., Reading, Pa. This latest edition contains recommendations for every type of spark plug use. Heat ranges and comparison charts are included as well as recommendations for the correct setting of spark plug gaps and distributor points.

Rhyme and reason both dominate the advertising of Martin Transfer Co., Longview, Wash. — rhyme in "Let Martin Do Your Cartin'" and reason in the large picture of a cat moving a kitten under the words, "Careful Handling"

Auto-Lite Catalog Available

A re-edited and re-vamped spark plug catalog has been completed by The Electric Auto-Lite Co.

The catalog includes the revised heat range chart with up-to-date type equivalents. The catalog also includes the new premium list of books offered through spark plug wrappers.

The catalogs can be obtained by writing to the Merchandising Division, The Electric Auto-Lite Co., Toledo, Ohio.

K. R. Wilson Issues Catalog

K. R. Wilson, Buffalo, N. Y., has published a 32-page illustrated catalog on hand, air and motor operated hydraulic arbor presses for shop and factory. The catalog describes the complete line of presses, gives specifications, pertinent data and the outstanding advantages of each model. The catalog may be obtained by writing to the manufacturer.

(TURN TO PAGE 148, PLEASE)

Put Pay Load on Bracket Pins?

NOT WITH Safety 5TH WHEELS!

Sure-footed ASF Safety 5th Wheels put trailer weight and tractor pull where they *belong* —on large steel bracket trunnions, *not* on small-diameter pins.

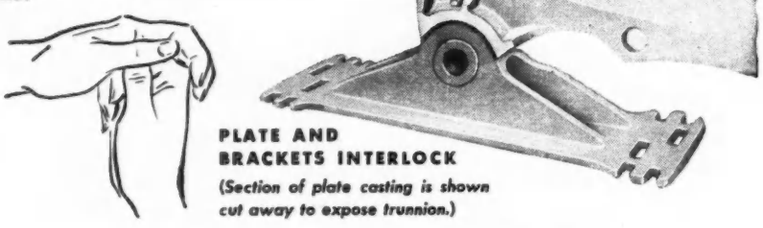


PLATE AND BRACKETS INTERLOCK
(Section of plate casting is shown cut away to expose trunnion.)

YOU CAN'T SHEAR THESE PINS!

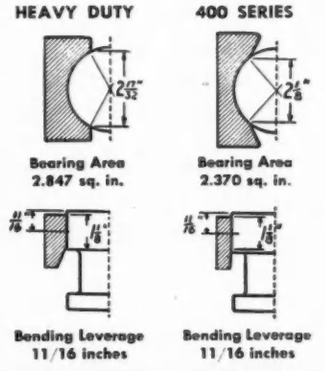
40 years of railroad experience designed the Safety 5th Wheel—to stand up, operate easily, stay *safe*. Safety 5th Wheels *can't* unlock accidentally. And Safety 5th Wheels stay strong because they are built to *resist* wear.

In bracket trunnions, as in the *lock*, hinge pins take no load whatever. Tough cast-steel to cast-steel contacts *carry* the pressure, *take* the pull.

Safety is the *best* insurance you can buy. Write, today. Automotive Division, American Steel Foundries, 400 N. Michigan Ave., Chicago 11.

JAWS AND KING-PINS LAST LONGER, TOO

Jaws grip the king-pin at the large-diameter top; give you the largest bearing area—*by far*—of any 5th wheel; won't spring or bend the pin.



A·S·F Safety 5th WHEEL

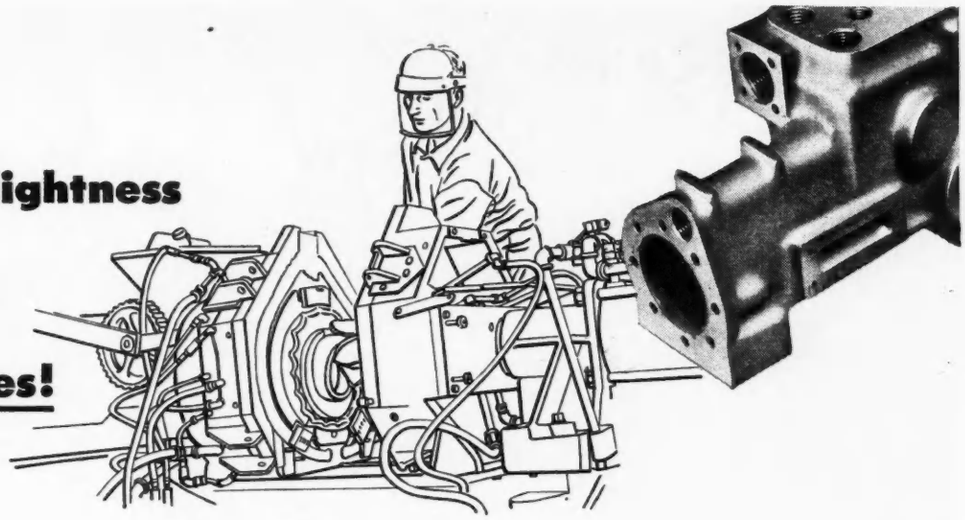
● WHAT'S NEW?

ANSWER . . . (To Question on P. 144)

The Eisenhauer Twin Engine Truck, developed by The Eisenhauer Mfg. Co., Van Wert, Ohio, has four front wheels placed in tandem. The arrangement is said to provide easier steering. The truck is designed for fast long distance hauling and is powered by two 93-hp. engines, one under the hood and one under the cab.

(Another Cartoon Quiz on P. 148)

casting lightness to close tolerances!



—with magnesium and the permanent mold method

For lightness and quality—good surfaces and close dimensional tolerances—progressive plants look to magnesium permanent mold castings.

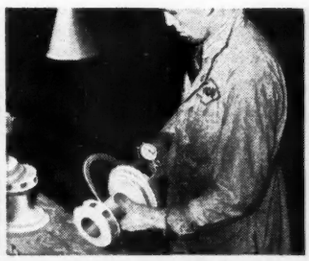
In many jobs, where production quantities are large enough, important savings in weight and machining can be yours through the close control possible in the casting of magnesium in permanent molds. And this material-and-method team gives you full benefit of magnesium's combined lightness, soundness and strength.

The Dow magnesium line includes alloys especially engineered for permanent mold casting. Applications now in use include a wide variety of fittings, brackets, housings, and other parts. For detailed information and engineering assistance in magnesium application, simply make your needs known at the nearest Dow office.

to make products move! MAGNESIUM

LIGHTEST OF ALL STRUCTURAL METALS

Available Dow magnesium forms include alloys for permanent mold casting with good casting characteristics and mechanical properties.



In Dow's own fabrication plants, close control is maintained over quality by careful inspection and constant research work.

Mechanical properties of magnesium permanent mold castings can be greatly improved by standard heat-treating procedures.

MAGNESIUM DIVISION • THE DOW CHEMICAL COMPANY, MIDLAND, MICHIGAN

New York • Boston • Philadelphia • Washington • Cleveland • Detroit • Chicago • St. Louis • Houston • San Francisco • Los Angeles • Seattle

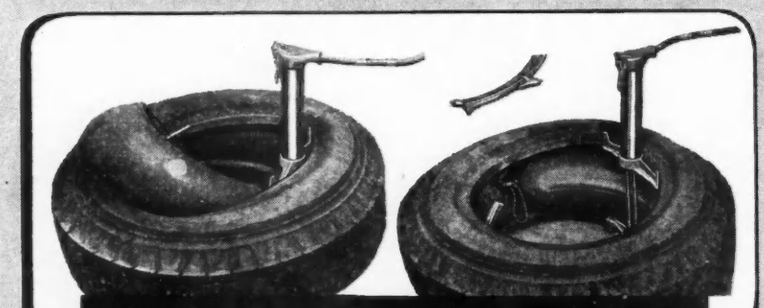
WHAT'S COMING?

WHICH OF THESE MANUFACTURERS IS PLANNING TO RE-ENTER THE TRUCK FIELD WITH THREE LIGHT TRUCK MODELS?

☐ NASH
☐ BUICK
☐ OLDSMOBILE
☐ DE SOTO

Answer on Page 150

QUIT Fighting Tires—USE



BISHMAN NO. 555 PNEUMATIC TIRE SPREADER

The ORIGINAL and ONLY Portable Pneumatic Tire Spreader that spreads all tires, including Heavy Duty Truck and Bus

WITHOUT LIFTING you can EASILY and QUICKLY remove and insert TUBES and AIR BAGS in BIG tires. Just lay casing on floor, insert jaws as above, press thumb lever. Jaws spread to about 11 inches. Operated from nearest air hose. Thumb catch holds tire open, freeing hands for other work. Weighs only 10 lbs.—compact, sturdy.

FASTEST INSPECTION SPREADER ON MARKET . . . . .
Gives ample spread for inspection and repairs. For a long opening, use BISHMAN Bead Props to hold one part of casing open, then move spreader.

No. 555 Complete Unit—spreader, wall bracket, 2 Bead Props. Dealer cost only **$27.50**

Also sold separately: No. 555-S, Spreader alone
No. 555-A, Wall Bracket alone. No. 575 Bead Props (pair)

ASK YOUR JOBBER or Write for Details

BISHMAN MFG. CO., OSSEO, MINN.

BISHMAN

Established 1926

CCJ NEWSCAST

(CONTINUED FROM PAGE 146)

New Publication Discusses Additive Engine Oils

In an effort to contribute further to the elementary material already published on the subject of petroleum and its products, the Petroleum Educational Institute has published a new book entitled "Additive Engine Oils." The informative text has been specially prepared in simple, easily understood language, yet presents a comprehensive explanation of detergent oils and detergent purging fluids for the benefit of maintenance personnel and fleet operators.

Descriptions of regular oil, premium oil, and heavy duty oil are given. It describes additives, why they are present in new oils, and why present trade names will be completely outmoded with the advent of these new oils on the market.

Gas Engines and Diesels

Profused illustrated with 400 diagrams and drawings that help to emphasize each point, the 150-page book offers a means to reducing cost of operation and increasing the efficiency and over-the-road operation of both high-speed diesels and high-compression spark engines.

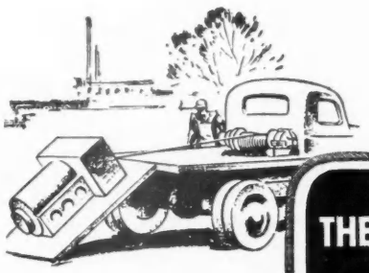
Forty-three timely subjects are discussed; among the more important to the fleet operator are such topics as: how gum, varnish and sludge deposits form in high-speed engines; how detergent additives remove these deposits; how to purge dirty engines with detergents, and the process of changing over engines from conventional to detergent oils. The causes and prevention of bearing corrosion is taken up in detail, as is the filtering, draining, reclaiming and mixing of additive engine oils.

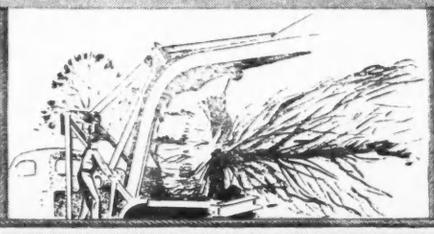
This publication is timely in its approach to a subject high on the list of fleet operators' problems. While the subject is eminently one of scientific character, the simplicity of both text and illustrations is such that the information can be readily assimilated by non-technical readers in the field. The book is priced at $3.75 and is available from the Petroleum Educational Institute, 704 So. Spring St., Los Angeles, Cal.

(TURN TO PAGE 150, PLEASE)

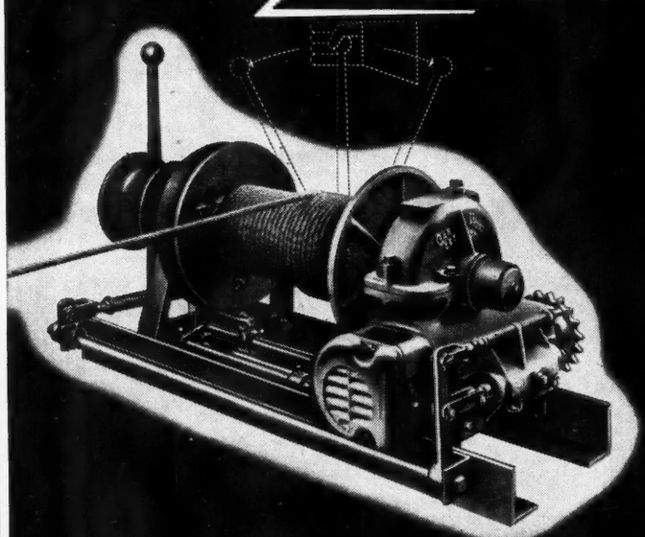
GAR WOOD *Presents*

THE WORLD'S MOST MODERN WINCHES



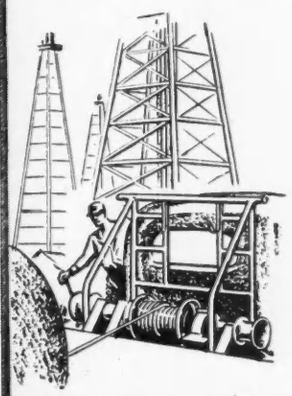


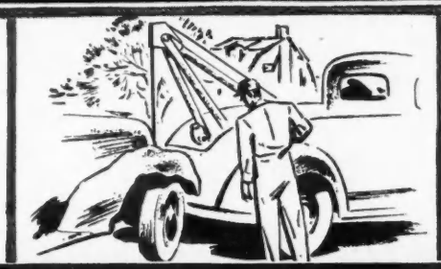
THE NEW *RAPID REVERSE* WINCH

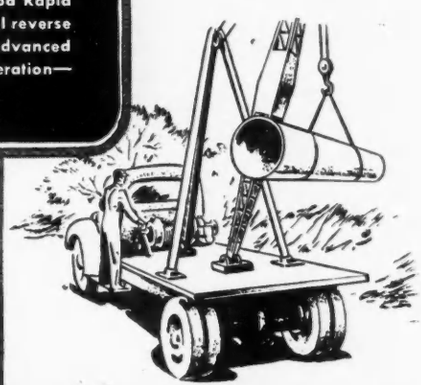


Radically different and vastly improved, the new Gar Wood Rapid Reverse Winches incorporate the exclusive Gar Wood integral reverse gear mechanism and single lever control—plus many other advanced features. Designed and built by Gar Wood for trouble free operation—

Where Ever Industry Needs A Lift.







GAR WOOD INDUSTRIES, INC.

WINCH AND CRANE DIVISION DETROIT 11, MICHIGAN

WORLD'S LARGEST MANUFACTURERS OF TRUCK AND TRAILER EQUIPMENT

OTHER PRODUCTS: Hoists • Bodies • Tanks • Road Machinery • Heating Equipment • Boats

CCJ NEWSCAST

(CONTINUED FROM PAGE 148)

WILLIAMSON JOINS MOTORCADE

Gen. William J. Williamson, vice president of Standard Freight Lines, has been elected vice president of Motorcade, Inc., a national organization concerned with union truck terminal site surveys, designs and operation. Gen. Williamson's new duty will be in addition to his work with Standard Freight Lines as vice president. The general direction of Motorcade will be centered in Chicago for the midwest.

RATE PROTECTION NECESSARY TO POSTWAR FOR-HIRE CARRIER

During the war the nation's intercity for-hire motor truck industry, operating under restrictions that forced curtailment of many services, lost some ground to the railroads but there are several new lines of possible profitable future development for the industry, according to the Department of Commerce.

The current monthly Industry Report on Domestic Transportation, prepared by the Transportation Unit, Bureau of Foreign and Domestic Commerce, indicates that although intercity for-hire motor carriers of property performed more ton-miles in the war years their percentage of total tonnage for all for-hire freight carriers declined slightly. Ton-miles of private trucks declined substantially during the war years even though tonnage carried may have remained about at pre-war levels. Tonnage of local for-hire carriers appears to have shown a definite increase.

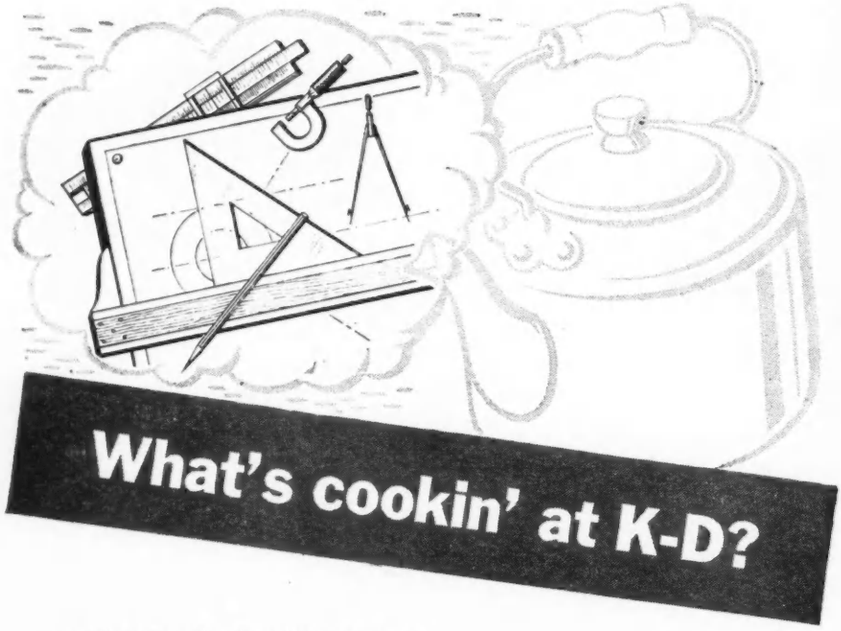
In view of the prospect of intense interagency competition in the post-war period and the probable resumption of private trucking on a scale at least equal to the immediate pre-war years, common and contract truckers face a period of uncertainty as to available traffic, the report says.

Restoration of prewar service standards with respect to speed, frequency, dependability and convenience of service is viewed in the report as one of the most pressing problems the for-hire trucking industry must face in competing with other for-hire agencies and with private trucking. Closely related to this problem is the vast replacement and rebuilding program which will be necessary to restore trucking equipment to its prewar condition or better.

In reviewing the effect of the war upon the net income of truck lines, the report indicated that the increase in operating expenses "has been relatively more serious than in other transport agencies, chiefly because a very high proportion of their costs vary directly with traffic and reflect items of expense which have been considerably increased during the war." As a result, interstate for-hire motor freight carriers are now operating at a rate level varying from about six to 10 per cent higher than railroad rates. These carriers, it is stated, contend that they are compelled to compete with a rail less-than-carlot rate structure which fails by a wide margin to cover the out-of-pocket cost of performing the service. The report concludes that if the heavier loading of rail merchandise cars during the war, with its attendant economies, cannot be retained, some adjustments may have to be made in rail rates on traffic for which truck lines compete.

Regarding the types of service the trucking industry should render to reflect its

(TURN TO PAGE 153, PLEASE)



What's cookin' at K-D?

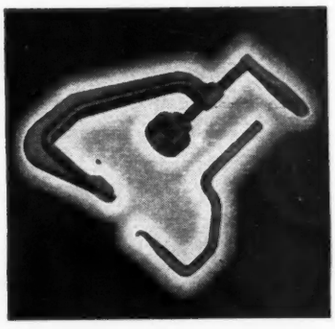
• Well, on the front burner, we are trying to satisfy your appetite for the old favorite K-D Tools . . . trying to fill the orders that had to wait 'til Uncle Sam's job was done. That's doing nicely.

• We're also cooking up some new stuff—stuff which was about ready to serve but had to be held over. That's coming along nicely, too. New K-D Tools to help you get your servicing jobs done easier . . . faster.

• And later, when the car manufacturers get up steam and there are new cars to service, you can look to K-D to serve you with the right tools for the new jobs.

ALREADY COOKED

Developed especially to pull valve guide assemblies in Ford-built motors no matter how tightly stuck. *K-D No. 920* Set (917 Retainer Driver and 918 Puller, as shown) for all motors but 60 HP. Use 860 Set for 60 HP.



K-D TOOLS
The Hustlers for Your Toolbox!

K-D MANUFACTURING CO., LANCASTER, PA. AND HAMILTON, ONT.

• WHAT'S COMING?

ANSWER . . . (To Question on P. 148)

Nash will be offering a commercial line for the first time since 1929. It will consist of ½-ton, ¾-ton and 1½-ton models. Nash was a big producer of trucks during the first World War.

(Another Cartoon Quiz on P. 153)

CCJ NEWSCAST

(CONTINUED FROM PAGE 150)

inherent advantages, it was noted that to some extent war experience clarified the area in which trucks may compete to best advantage. "As an example, the use of trucks as extensions of assembly lines, as conveyors of parts and subassemblies between plants located relatively short distances apart—a normal practice in some areas—has proved extremely efficient and may well be still further expanded as a result of war experience," the report said.

Other promising opportunities for trucking appear to lie in many types of short-haul petroleum operations, and in pick-up and delivery service for airlines, according to the report. It was said that the development of data on comparative costs of transportation by various agencies will be useful in determining areas of relative economy and fitness.

The report pointed out that significant changes in the competitive character of the trucking industry occurred during the war. Many small carriers were granted temporary authority to suspend operations for such reasons as military service, restrictions upon operating authority, shortages of labor, equipment and supplies, changes in industrial production, and bans on nonessential transportation services. In addition, an unknown number left the industry without protecting their operating rights in this manner. On the other hand, the number of large Class I carriers subject to I.C.C. regulation has continued to increase during the war, the report said.

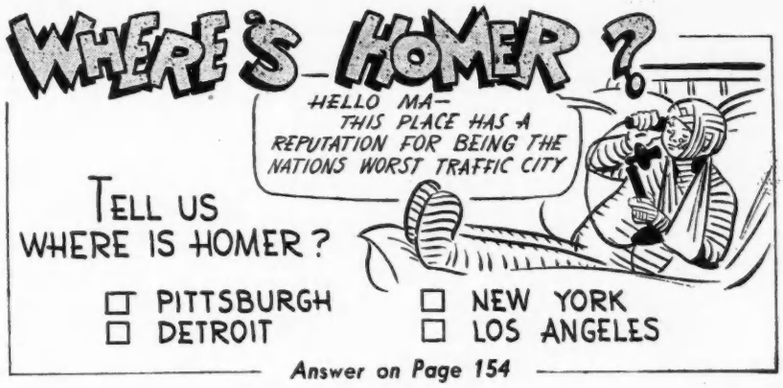
"It appeared that the least restricted class of carriers (large regular-route common carriers of general commodities) most often obtained the advantage of temporary additions to operating authority, and were usually granted authority for a longer period of time than other carriers."

The report stated that in the postwar period competition within the industry will be lessened unless a regulatory policy of liberal entry and fewer restrictions is followed. Such a policy will be of special importance to the small carriers who wish to resume their operations, and to returning veterans, who have shown a wide interest in starting a trucking business.

As to efficiency of truck operation during the war, the report concluded that real gains were limited. Although the same or more tonnage was handled with less mileage, this improvement was largely offset by qualitative and quantitative reductions in the service offered. Some benefits, it was said, may be carried over from the wartime joint-action plans established among carriers and relaxation of state restrictions on maximum permissible sizes and weights will help to increase the utilization of trucks.

The complete Industry Report may be obtained free of charge from the Publications Unit, Bureau of Foreign and Domestic Commerce, Department of Commerce, Washington 25, D. C.

(TURN TO PAGE 240, PLEASE)


WHERE'S HOMER?
HELLO MA— THIS PLACE HAS A REPUTATION FOR BEING THE NATIONS WORST TRAFFIC CITY
TELL US WHERE IS HOMER?
☐ PITTSBURGH
☐ DETROIT
☐ NEW YORK
☐ LOS ANGELES

Answer on Page 154

YOU WOULDN'T HALF DRAIN A CRANK CASE AND ADD FRESH OIL TO OLD

Don't Do Half a Brake System Job...

PURITANIZE*

What would you think of a service man who drained about half the oil out of a crank case and then filled up with fresh oil? That's right—and you can say the same about the man who adds a shot of hydraulic brake fluid to a brake system that is working with old, gummed-up brake fluid.

For safety and efficiency your commercial cars and trucks need a periodic *Puritanize job. Here is a new brake service that in the long run means lower maintenance costs and freedom from emergency service on your hydraulic brake systems. All you need is some fast-acting Puritan Hydraulic Brake Flushing Fluid and Puritan, non-gumming, low freezing, high boiling, Super Brake Fluid to keep your fleet in continuous operation. Get your supply of these Puritan Products from your distributor now. Protect the life line of your cars and trucks.

*PURITANIZE...TWO STEPS TO BRAKE SAFETY

1 Clean out brake line with fast acting, thorough Puritan Hydraulic Brake Flushing Fluid.

2 Refill with non-gumming, longlasting, all—"miscible" Puritan Super Hydraulic Brake Fluid.

NAPA Assurance of Quality

PURITAN COMPANY, INC.
ROCHESTER, NEW YORK

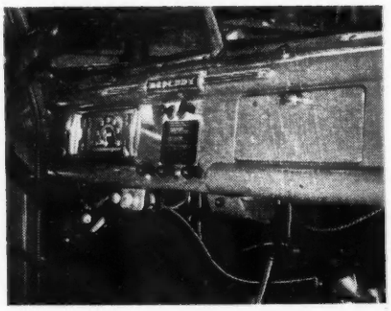
Mercury Truck Introduced in Canada

A NEW line of Mercury trucks with Hotchkiss drive ranging from a 114-in. wheelbase half-ton pickup model to a three-tonner with 176-in. wheelbase, comprising 39 models, has been announced by the Ford Motor Co., of Canada, Ltd., for distribution by its newly created Mercury-Lincoln dealer group. The range of basic models is given here in tabular form.

This line features standard SAE cab-to-axle dimensions and frame width, thus permitting the installation of 9, 12, and 14-ft. stake bodies as well as a wide range of special purpose and custom-built bodies.

Two Mercury truck engines are offered in this line—a 221-cu. in. V-8 for the ½- and 1½-ton capacity; and a 239-cu. in. V-8 for the 2-ton, 3-ton, as well as the school bus chassis.

Front view of 3-ton Mercury chassis showing grille and front end design

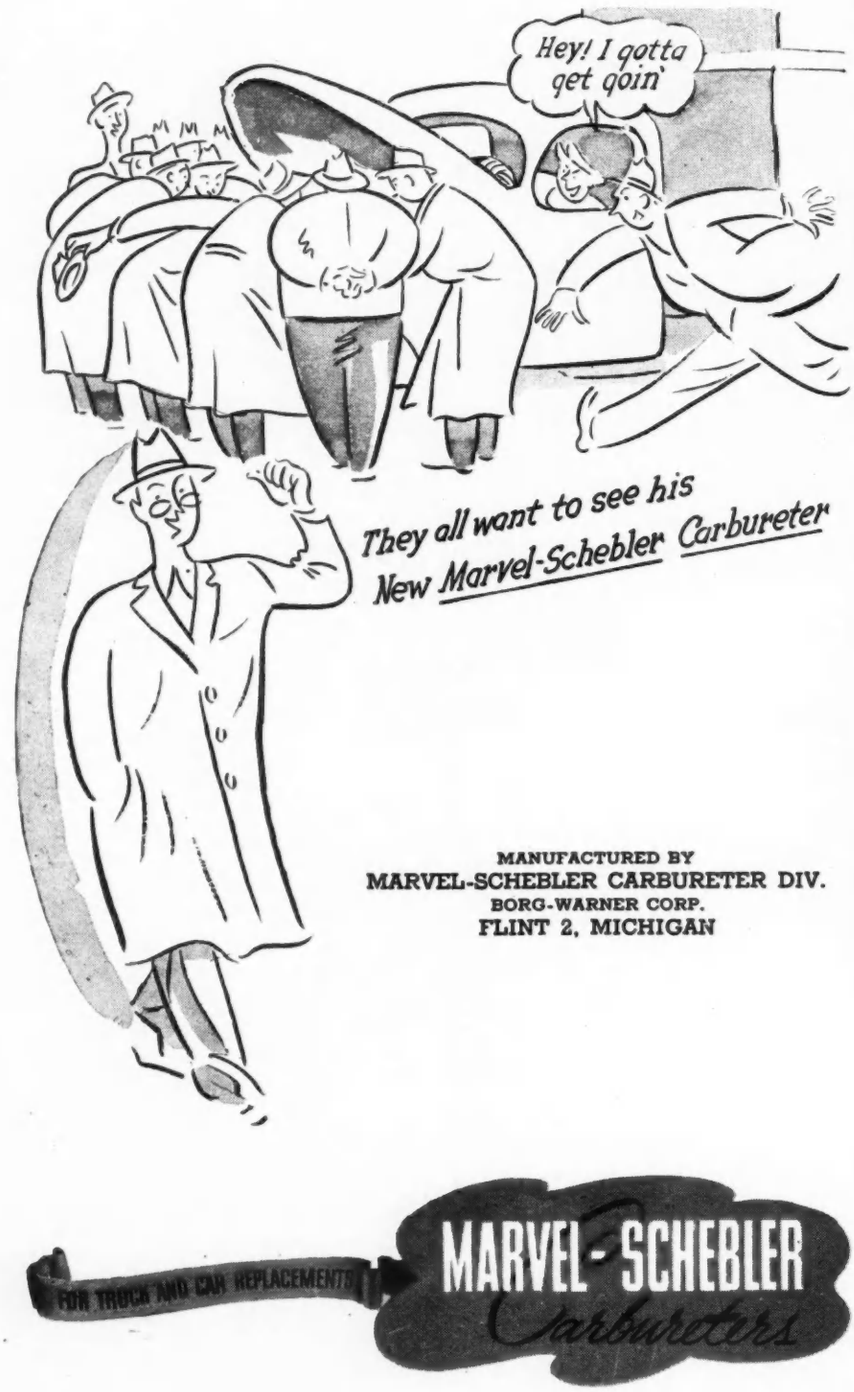


Close-up view of the instrument panel and controls of the new Mercury truck

The 221-cu. in. engine has a bore of 3 1/16 x 3¾ in. stroke, rated 93 hp. at 3800 r.p.m. It features interchangeable aluminum cylinder heads with a compression ratio of 6.8 to 1. Maximum torque is 166 ft. lb.

The 239-cu. in. engine has a bore of 3 3/16 in. x 3¾ in. stroke, rated 100 hp. at 3800 r.p.m. It features interchangeable aluminum cylinder heads with compression ratio of 7.2 to 1. A special high torque camshaft providing earlier opening of intake and exhaust valves gives a maximum torque of 188 ft. lb. at 1400 r.p.m.

(TURN TO PAGE 156, PLEASE)



● WHERE'S HOMER?

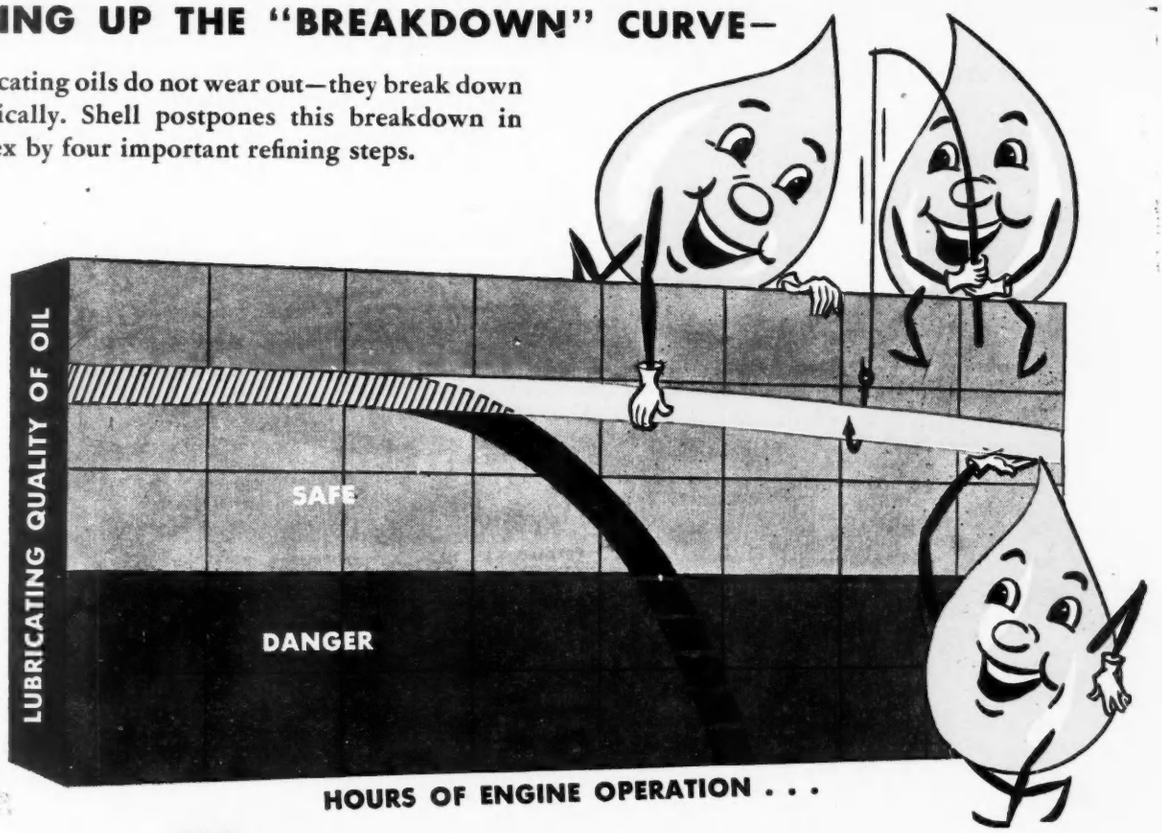
ANSWER . . . (To Question on P. 153)

Los Angeles, generally rated as the country's most dangerous big city. It has almost as many automobiles as people, and it covers an area of 451 square miles.

(Another Cartoon Quiz on P. 156)

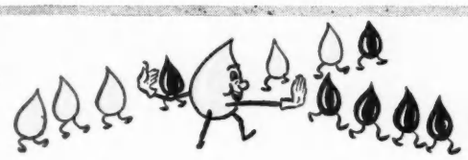
HOLDING UP THE "BREAKDOWN" CURVE—

Lubricating oils do not wear out—they break down chemically. Shell postpones this breakdown in Talpex by four important refining steps.



THESE 4 TALPEX PERFORMANCE FACTORS SAFEGUARD HIGH-SPEED DIESELS

1.



Talpex is protected by the removal of the oil's natural liabilities—those oil components that readily oxidize. Shell does this by means of a special solvent-extraction process.

2.

Talpex is protected with an anti-oxidant that effectively serves to still further retard the formation of corrosive compounds and objectionable sludge and lacquer.

3.

Talpex has effective corrosion-preventive properties which are obtained by special refining methods. This means better performance and longer life of the engine's wearing parts.

4.

Talpex has detergent properties that keep carbon, lacquer and rust particles from adhering to pistons, rings, valves and ports—keeps these contaminants "moving" until drained from the engine.

The Shell Lubrication Engineer will give you sound advice about the lubrication of *any* type of Diesel, whether slow, medium, or high-speed. Write for a copy of Shell's booklet, "The Fundamentals of Diesel Lubrication." Shell Oil Company, Incorporated, 50 West 50th Street, New York 20, New York or 100 Bush Street, San Francisco 6, California.

SHELL

SHELL DIESEL LUBRICANTS

MERCURY TRUCK

(CONTINUED FROM PAGE 154)

Engine Features

FEATURES common to both engines include four-ring aluminum pistons, hard alloy intake and exhaust valve inserts, aluminum timing gear, precision-set valves, full pressure lubrication with removable oil pan under the oil pump to facilitate cleaning of oil pump and screen, dual downdraft carburetor with balanced carburetion, oil bath cleaner, replaceable cartridge type oil filter, high output air cooled generator with voltage regulation, high efficiency fan, pressure valve radiator cap, split flywheel housing to facilitate servicing.

Distinctive features of the engines include the high torque camshaft for the 239-cu. in. engine, centrifuge type sediment traps in each crankpin, and the use of copper-lead, lead-tin coated bearings with steel back in con rods. These bearings are of replaceable type and locked in the rod instead of the floating type used in Ford truck engines in the U.S.A. Main bearings are of cadmium-nickel with steel back, the main bearing caps being piloted for positive alignment to increase bearing life.

Features of Power Train

THE 3-ton and school bus chasses feature full-floating two-speed rear axles with vacuum shift. Universal joints on all models are of needle roller bearing type.

The ½-ton model uses the 10-in. semi-centrifugal clutch; the 1-ton and 1½-ton jobs have 11-in. semi-centrifugal clutches; while the 2-ton, 3-ton, and school bus chasses have the 11-in. semi-centrifugal heavy-duty type clutch.

Transmission setup is as follows: 3-speed blocker type unit on the ½-ton; and 4-speed truck type on the other models, with automatic internal spring type reverse lock on 4-speed models.

Rear axle on the ½-ton model is of ¾ floating type with standard ratio of 3.78 to 1 and option of 4.11 to 1. The 1-ton axle is of full floating type with a ratio of 4.86 to 1 and option of 4.11 to 1. On the 1½-ton, the axle is full floating with ratio of 5.83 to 1.

(TURN TO PAGE 158, PLEASE)

DESIGNED FOR LONG LIFE

Gunites are designed for durability — the type of metal used, structure of the drum, method of casting, and standards of machining are all selected to produce long-lasting drums. You get better performance from Gunites—longer lining life, fewer adjustments, more efficient braking, lower operating costs, and elimination of breakage. Try a set on your toughest run and see how well they stand up. Buy GUNITES — *for better braking!*

MADE BY GUNITE FOUNDRIES ROCKFORD, ILLINOIS

GUNITE BRAKE DRUMS . . . FOR TRUCKS, TRACTORS, TRAILERS *and* BUSES

GULF OIL CO. HAS DEVELOPED AN OIL THAT . . . .

☐ WILL NOT FORM BUBBLES
☐ WILL FORM BIGGER BUBBLES
☐ IS COMPOSED OF MILLIONS OF TINY BUBBLES

Answer on Page 158

Made for the job!

Snap-on IMPACT SOCKETS

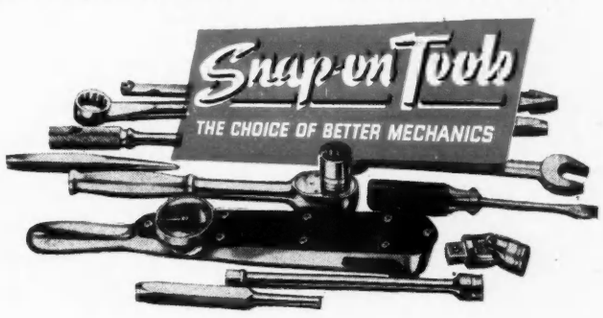
for all types of Impact Wrenches

The constant, terrific pounding of powerful pneumatic impact drivers require sockets with rugged stamina far beyond that offered by ordinary sockets.

Snap-on impact sockets are *made for the job!* Special alloy steel and correct heat treatment provide utmost durability. Accurate fit and dependable locking devices contribute to speed and safety.

Snap-on impact sockets are widely used in fleet maintenance operations . . . wherever top wrench performance is required. Available in 3/8", 1/2", 5/8", 3/4", 1" and 1 1/2" square drives with a full range of hexagon and square wrench sizes from 5/16" to 4 3/4" in standard length and bolt clearance types. Write for complete catalog of Snap-on service tools, and special catalog M46 describing the complete range of Snap-on impact sockets.

SNAP-ON TOOLS CORPORATION
8026-D 28th AVENUE KENOSHA, WISCONSIN



MERCURY TRUCK

(CONTINUED FROM PAGE 156)

On the 2-ton the axle is full floating with ratio of 6.67 to 1 and option of 5.83 to 1. The 3-ton and school bus axles are of full-floating, two speed type with standard ratio—6.33 to 1 and 8.80 to 1; and an option of 5.83 to 1 and 8.11 to 1.

Steering gear is of worm and roller type with ratio of 18.2 to 1 on the ½- and 1-ton models; 18.4 to 1 on the others.

Brakes are hydraulic on all models, with driveshaft hand brakes on all models from 2-ton upward. The 3-ton and school bus chasses include vacuum booster as standard equipment. Brake drums on all models except the ½-ton are of composite construction —cast iron surface with steel disc. Drum diameter is 12 in. front and rear on the ½-ton with a lining area of 162 sq. in.; 12 in. front and 14 in. rear on the 1-ton with 186.8-sq. in. area; and 14 in. front and 15 in. rear on the other models, with a lining area of 303 sq. in.

The ½-ton comes in a 114-in. wheelbase, the 1-ton in a 122-in. wheelbase, the 1½-ton in 134 and 158 in., and the 2-ton and 3-ton in 134, 158 and 176 in. The 3-ton also comes in a special tractor truck model with a 134-in. wheelbase. A 2-ton school bus chassis has a wheelbase of 194 in.

Heavy-duty type frames are supplied for these vehicles, with special high-tensile alloy steel reinforcements for the 2-ton, 3-ton, and school bus frames.

Shock absorber equipment consists of four double-acting, hydraulic shocks on the ½-ton; two on the front end of the 1-ton; and two on the front of the special truck tractor 3-ton chassis.

Suspension for all models comprises four longitudinal semi-elliptic springs, with five-leaf auxiliary rear springs on the 2-ton and seven-leaf rear auxiliary springs on the 3-ton.

Where 9.00 x 20 tire equipment is specified on the 3-ton jobs, the rear axle has special wide tread to provide ample wheel clearance.

EDITOR'S NOTE: Ford of Canada's Mercury trucks are quite similar to current Ford trucks in this country but are rated differently. The bigger Mercury job is essentially Ford's 1½-ton truck.

GRAY-MILLS

NEW AGITOR PARTS COLD CLEANING SYSTEM

MODEL J-75

Specially Designed for FLEET, BUS AND TRACTOR SERVICE DEPARTMENTS

Ready for action at the flip of a switch

Hi-volume Hose Cleaning

Handy for transfer of liquids, too.

Gaining nation-wide acceptance in service departments everywhere for fleets, buses and tractors. No little wonder mechanics and operators alike approve of Agitor—its fast, safe cleaning action requires no heating—clips hours off repair and overhaul jobs—gets 'em on the road sooner—helps keep them running longer.

Model J-75 combines Air-Agitation and Hose Cleaning in a heavy-duty all-steel unit—for cleaning motor blocks, crankcases, axles, transmissions, differentials and other parts. Portable Handi-Pump is also ideal for liquid transfer tasks . . . empties a 55 gallon drum of solvent in about 9 minutes.

Agitors and Agitene Solvents are available from Automotive Distributors in cities everywhere.

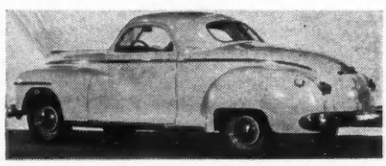
GRAY-MILLS CORPORATION
1942 Ridge Avenue Evanston, Illinois

SEND FOR NEW CATALOG

Gray-Mills Corporation, Evanston, Ill.
Please send Agitor Catalog.

Name_____
Position_____
Company_____
Address_____
City_____ State_____

3 AGITOR MODELS



The 1946 Dodge Deluxe Three-Passenger Business Coupe. Spaciousness and comfort are features of the new design. New curve-around bumpers front and rear have rigid supports for use with new Dodge bumper jack. Note exceptionally large storage capacity within the long rear deck

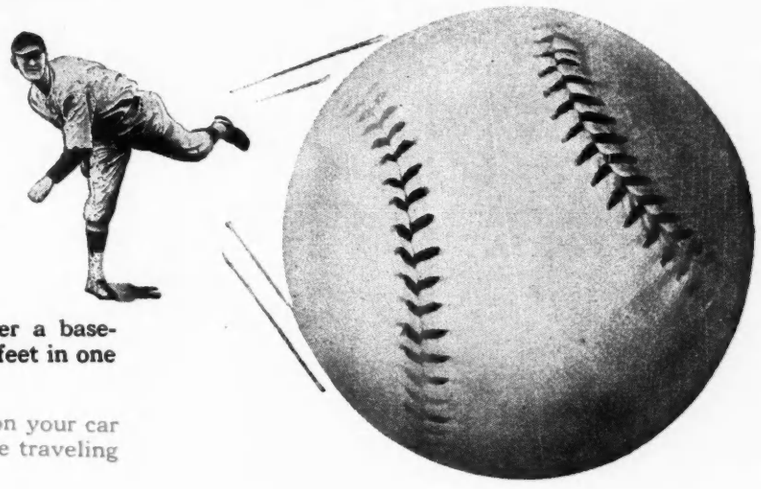
● WHAT'S NEW?

ANSWER . . . (To Question on P. 156)

Gulf has produced a bubble-less oil. Gulf announces that it has developed an anti-foam agent that keeps the oil in a fluid state. The agent breaks the bubbles by reducing the surface tension of the oil.

(Another Cartoon Quiz on P. 160)

HOW FAR IN ~~FAST IS~~ A SECOND?



Big League Pitchers deliver a baseball at a speed rate of 190 feet in one second.

When the speedometer on your car or truck reads 50 — you are traveling 75 feet per second . . .

. . . that's why *Feather Touch Stopability* is important

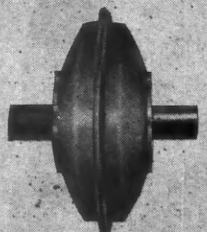
Yes, energy in motion on improved roads, and in city traffic has given emphasis to the need for a margin of extra stopability and smooth, feather-touch brake action through Power Braking.

Vacdraulic—added to any good hydraulic brake system, steps up the pressure exerted at the brake drums and enables the school girl or truck driver to have equally controlled, safe brake action.

Vacdraulic feather-touch Power Braking is being specified on "new fleet" orders —and can be a "plus" as well as "extra safety" feature on many new car sales.

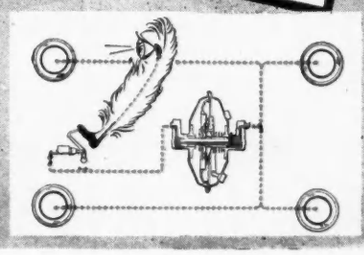
Vacdraulic is easy to install and its power braking is accomplished without action lag, rods or links to get out of adjustments.

See your Vacdraulic Distributor or write us for details.



Write for the complete Vacdraulic catalog of engineering and installation details today.

VACDRAULIC POWER BRAKING



KELSEY-HAYES WHEEL CO.
Detroit 32, Mich.

Sold to Automotive Distributors by
EMPIRE ELECTRIC BRAKE CO.
Newark 7, N. J.

VACDRAULIC is a Trade Mark of Empire Electric Brake Company

NEW PRODUCTS

(CONTINUED FROM PAGE 108)

flame, providing protection from radiant heat. On hot metal surfaces the Dry Chemical forms an insulating film, helping to guard against reflash.

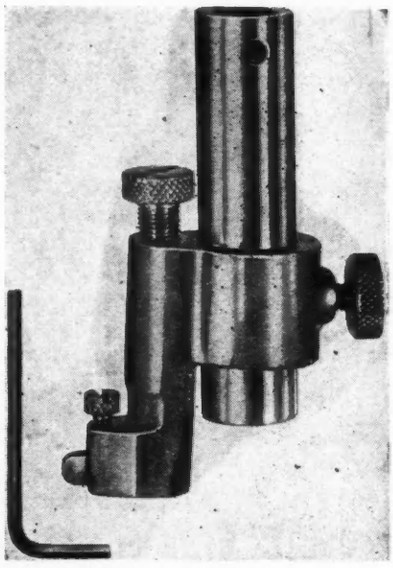
The extinguisher has a squeeze grip handle for positive control. Its light weights permits easy carrying. The chemical will not deteriorate or cake, according to the manufacturer, and is effective under all climatic conditions.

Use Free Postcard For More Details.

P260. Distributor Tool

A distributor regrooving tool for correcting ignition problems on 6 or 8 cylinder Delco-Remy models, where the plate is suspended by steel balls, has been placed on the market by Lanagan and Hoke, Philadelphia, Pa.

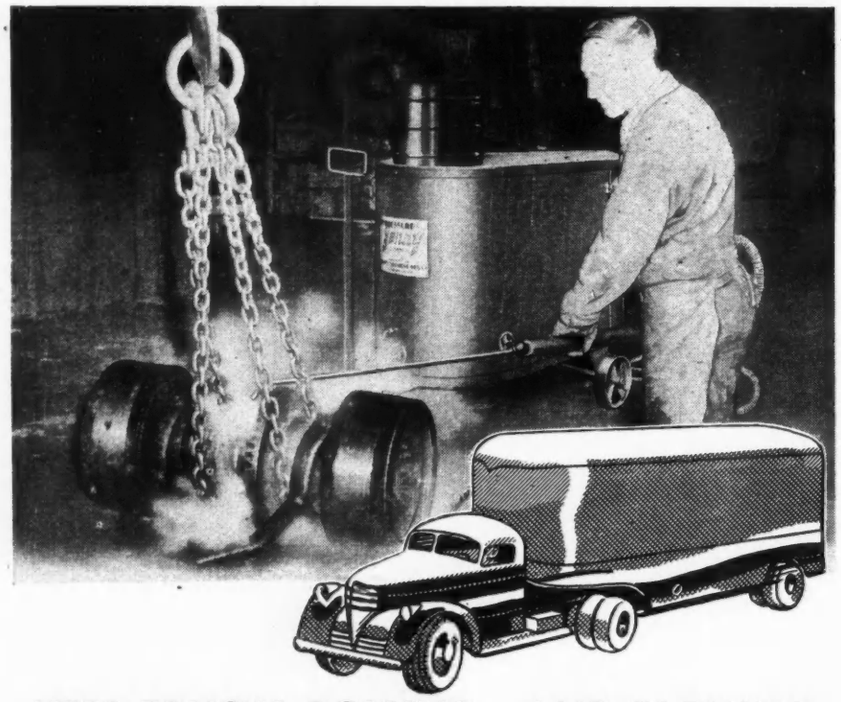
This new tool corrects such common ignition troubles as "stumble" on acceleration, uneven idling condition, and high-speed miss caused by pitted or worn grooves in the housing.



This tool takes a lathe cut and renews the ball race concentric with the shaft. It does not require removal of the distributor shaft; and actual regrooving takes only a few minutes.

Use Free Postcard For More Details.

(TURN TO PAGE 162, PLEASE)



KEEP TRUCKS ROLLING...AND EARNING

With Hypressure Jenny Steam Cleaner

Road time is profit time. That's why hundreds of profit-wise operators clean trucks *before* repairs with HYPRESSURE JENNY STEAM CLEANER . . . thus saving up to 40% of mechanics' time ordinarily lost wiping oil and grease from tools and equipment. Time saved in the shop means more road hours . . . more pay mileage.

In addition, periodic cleaning of trucks with HYPRESSURE JENNY often prevents costly and dangerous road failures by revealing worn, damaged or defective parts that might otherwise escape attention. JENNY is handy too for cleaning floors, runways, grease pits, windows, skylights, etc. . . . doing the job more thoroughly and from 8 to 10 times faster than ordinary hand methods.

Write today for complete information and prices.

THE ADJUSTA-BLAST-GUN

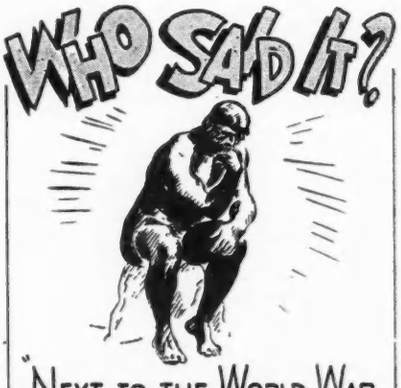
. . . a recent addition to HYPRESSURE JENNY . . . gives the operator instant, finger tip control of the right type and amount of spray or water for any cleaning requirement. The ADJUSTA-BLAST-GUN will more than double the cleaning efficiency of any JENNY now using the old type cleaning gun. It is easy and simple to attach. Price, complete, $35.00.

Hypressure Jenny Division of

HOMESTEAD VALVE MFG. CO.

MAKERS OF "PEAK PERFORMANCE" VALVES FOR 50 Years 1892 1942

P. O. BOX 90 • • • CORAOPOLIS • • • PENNSYLVANIA


WHO SAID IT?
"NEXT TO THE WORLD WAR THE AUTOMOBILE HAS DONE MORE TO MAKE AMERICA A NATION OF THINKERS THAN ANY OTHER INVENTION OR AGENCY"
☐ HENRY FORD
☐ THOMAS A EDISON
☐ WOODROW WILSON
☐ ALBERT EINSTEIN

Answer on Page 162

This SERRATED SADDLE never gets bald — its points stay sharp for sure grip on the axle. Milling — rather than casting or forging — is the cause of this benefit.
BLACKHAWK HYDRAULIC JACK
You get LONGER PUMP LIFE because the Blackhawk pump housing is not a casting — and is not a part of the base — it's a "mirro-finished" non-porous cylinder bored from solid steel — easily replaced if necessary.
Do you know that you can also get full power and travel from a Blackhawk Jack when you work it on its side? Blackhawk — original PUMP ON SIDE feature holds the reason.
Mister, there's a dozen more outstanding features inside to make this Blackhawk Jack rugged and dependable
This jack slides in place fast - - - thanks to its SLED TYPE BASE.

BUILT RIGHT from the bottom up

BLACKHAWK'S basic *difference* — from practical design to precision construction — makes these Hydraulic Jacks the world's most dependable and demanded jacks. From bottom up — they're built to give service way beyond their ratings. When you need a jack — buy the best — even if you must wait for it — buy a Blackhawk from your Blackhawk Jobber.

A Product of

BLACKHAWK MFG. CO.
Dept. J1146, Milwaukee 1, Wis.

BLACKHAWK

NEW PRODUCTS

(CONTINUED FROM PAGE 160)

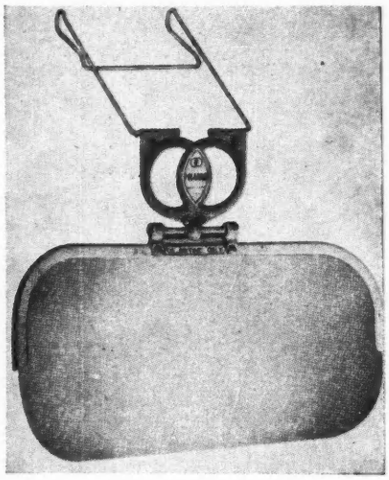
P261. Paint Remover

A new, non-inflammable paint remover has been made available by Kelite Products, Inc., of Los Angeles. This material is safe on any metal or hardwood surface and is said to provide the speedy removal of all types of paint and enamel. As many as 8 coats of paint can be penetrated, loosened and removed in one step, taking no longer than 30 minutes. Removal after penetration is easy in that paint or enamel can be sheeted off by a pressure rinse.

Use Free Postcard For More Details.

P262. Day-Driving Sun Visor

The Polaroid Corp., Boston, Mass., has developed a Day-Driving Visor for installation behind the windshield within the driver's scope of vision to reduce sun glare and accompanying day driving fatigue. The visor consists of a polarizing curved plastic film mounted in a light-weight hinged metal frame. It has the same light control properties as the polarized sun goggles, permitting the useful "seeing" part of reflected light to pass through, but blocking the glare which dilutes it.



The visor weights only 8 oz. It can be flipped in or out of the field of view as the driver wishes. Installation requires no tools and takes only a few seconds.

Use Free Postcard For More Details.

P263. Improved 6-In. Grinder

The Baldor Electric Co., St. Louis, Mo., announces an improved 6-in. bench grinder, the No. 62. This grinder, according to the manufacturer, is powered with a capacitor type motor which will not burn out even though it is repeatedly overloaded.

It has tapered end bells, providing wide clearance between the wheels and the motor frame and is equipped with wheels 6 in. in diameter, 5/8 in. wide.

Use Free Postcard For More Details.

P264. Radiator Seal

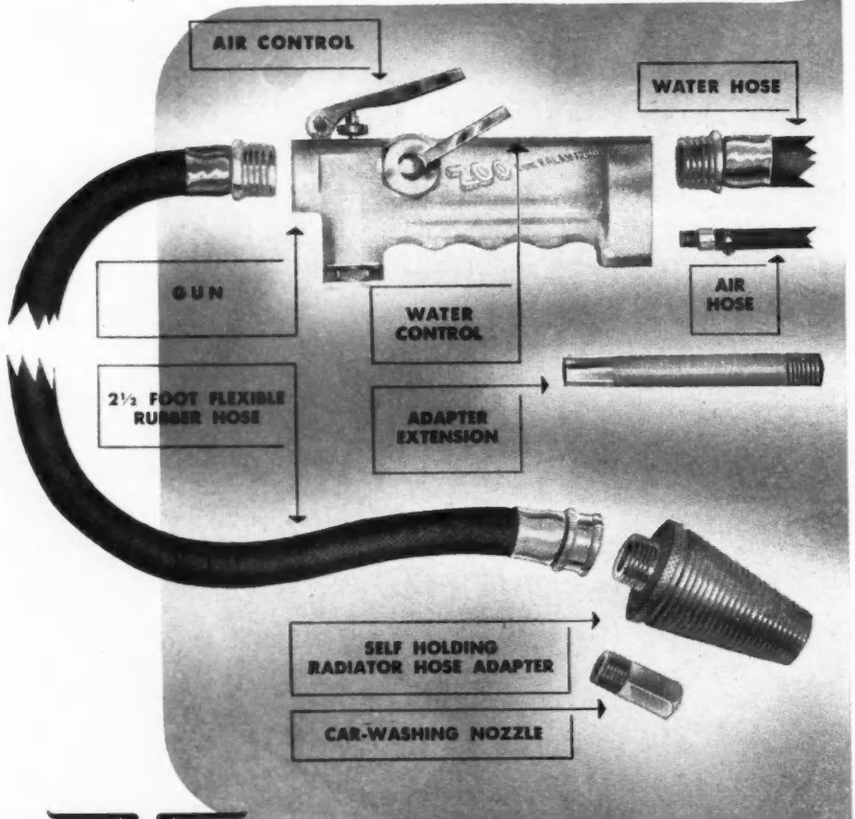
The Moguloid Co. of America, Chicago, Ill., has announced the development of a new radiator leak

(TURN TO PAGE 164, PLEASE)

ZOO QUALITY BRAND PRODUCTS

COMBINATION MASTER GUN

FOR REVERSE FLUSHING, PRESSURE CAR WASHING AND AIR CLEANING



Aero-Motive MANUFACTURING COMPANY

The Zoo Combination Reverse Flush Gun and High Pressure Car Washer is a piece of equipment that quickly pays for itself on the first few jobs.
Reverse Flushing is the modern way of cleaning radiators, heaters and engine blocks. Works on standard air and water pressures. Constructed of aircraft aluminum and bronze — precision machined to close tolerances and designed to give years of service.
Get it from your Jobber or write factory for complete information. Price $10.00.

AERO-MOTIVE MANUFACTURING COMPANY
1803 ALCOTT STREET • KALAMAZOO 24, MICHIGAN

• WHO SAID IT?

ANSWER . . . (To Question on P. 160)

Thomas A. Edison, one of the greatest thinkers of all time.

(Another Cartoon Quiz on P. 164)

CONSERVE...

Buy EDISON!

Batteries are precious! In the months to come, there may not be enough batteries to go around. Conserve your Edison by installing a regular check-up procedure. The addition of distilled water, a quick or a long charge, *done at the right time*, may give you many more months of satisfying service. Help conserve batteries for American transportation by backing the conservation plans of your Edison supplier.

If you must buy a battery, it will pay you to buy Edison. Edison quality . . . the quality that assures you a battery as good as the name . . . has never been sold short to quantity. You can be assured of our efforts to give you a battery that will consistently continue to be a *quality* battery.

EDISON
BATTERIES
THOMAS A. EDISON, INC., EMARK DIVISION
PLANT NO. 1, KEARNY, N. J.

you can always rely on an EDISON

NEW PRODUCTS

(CONTINUED FROM PAGE 162)

impregnator called Moguloid Radiator Seal.

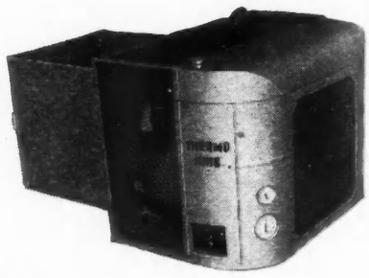
This new solution has a pure colloidal base and actually enters the leak itself and hardens into a permanent metallic bond. One can of the solution is enough to repair a leaky radiator.

Use Free Postcard For More Details.

P265. Refrigerator Unit

The U. S. Thermo Control Co., Minneapolis, Minn., has improved its line of refrigeration units. The new models have a new type of starter generator as an integral part of the engine.

Model D-10, illustrated, is larger in size and refrigeration capacity than previous models. Operation is automatic, once the desired temperature has been adjusted on the thermostatic control. Refrigeration is accomplished by forced convection. Air is drawn from the trailer body into the evaporator coil; the heat is extracted, and the air is blown back into the body.



The new Thermo-King features an easily-installed kit for heating service. Heat from the engine and the refrigeration gas is thus utilized, and the temperature is thermostatically controlled.

Use Free Postcard For More Details.

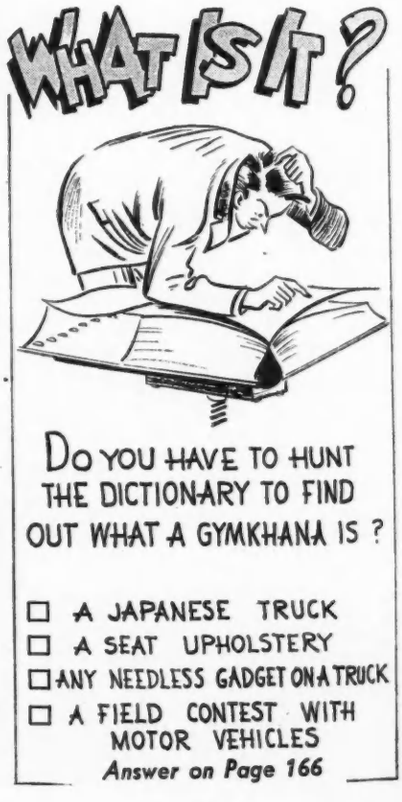
P266. Hydraulic Tire Press

The Wats Manufacturing Enterprises of Miami, Fla., has two new types of equipment for changing truck and bus tires.

This Tirematic hydraulic press is so designed that it frees the beads from the rims of either drop-center or split-rim wheels while the wheel is upright on the dolly.

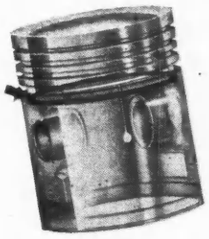
(TURN TO PAGE 166, PLEASE)

SINCE 1920
TOUGH
Many things make U. S. Axles Tough—correct design, the right steels, the most modern methods in heat-treating, accurate machining, and critical inspections. Get U. S. Axles and you'll "get tough" with axle failures. Bus and truck owners know this is true. The U. S. Axle Co., Inc.
US
AXLES
Write for Complete New Catalog -
THE U. S. AXLE CO., INC., POTTSTOWN, PA.


WHAT IS IT?
DO YOU HAVE TO HUNT THE DICTIONARY TO FIND OUT WHAT A GYMKHANA IS ?
☐ A JAPANESE TRUCK
☐ A SEAT UPHOLSTERY
☐ ANY NEEDLESS GADGET ON A TRUCK
☐ A FIELD CONTEST WITH MOTOR VEHICLES
Answer on Page 166

"Ugh! Little belt put around piston make big thing for repairmen."
PATCHWORK PETE
"WHUT'S THAT PAPOOSE TALKIN' ABOUT NOW? YUH WOULD THINK HE REALLY HAS GOT SUMPIN'."
PEE WEE
"YOU BET HE'S GOT SOMETHING! OVER A HALF MILLION OF THOSE STEEL-BELTED PISTONS PROVED THEMSELVES IN HEAVY DUTY SERVICE IN WARTIME ENGINES."
T.P. TIM

The New TP STEEL-BELTED PISTON



Phantom View Showing cast-in STEEL BELT.

For the first time — a special alloy steel belt girdling the entire circumference is cast into an aluminum piston skirt. It positively controls expansion so aluminum pistons can be fitted more closely without danger of scoring or seizing. That means quieter operation—more power, less oil consumption, and longer piston life in car, truck, bus, tractor and airplane engines.

Here is a great chance for repairmen to render *better* service to customers.

40 STEEL-BELTED

numbers are listed in the new Thompson catalog. More of these super-service pistons are being added — as fast as we can get the molds and produce them.

Use the Machine Shop Facilities of your

Thompson Products *Distributor*

CLEVELAND • DETROIT • LOS ANGELES

NEW PRODUCTS

(CONTINUED FROM PAGE 164)

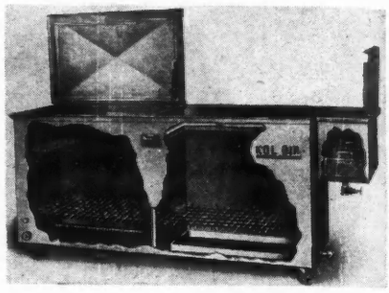
In tests at Pan American Airways shops in Miami the Tirematic manual tire-changer has been used to make complete changes of large size airplane tires within 17 min. A smaller size of the manual tire-changer is also being manufactured for tire repair shops and service stations.

Use Free Postcard For More Details.

P267. Portable Parts Cleaner

Latest in the Magnus Chemical Co. line of cleaners and equipment for bus or truck fleet cleaning is the Magnus Kol-Dip Parts Cleaning System.

This compact, portable unit consists of a large washing compartment, a rinse tank of the same size and a smaller chamber for removing tough engine varnish, gum and carbonized oil from smaller parts.



The Kol-Dip contains many details designed to facilitate cleaning and rinsing. The washing compartment is equipped with wire hangers and a movable platform for tools and parts. An air-agitation pipe is at the bottom. The reinforced hinged cover prevents loss of solution and contamination of the cleaner by shop dirt and rinse water.

Use Free Postcard For More Details.

P268. Flux-Coated Welding Rod

A new flux-coated bronze welding rod for application by the oxyacetylene process has been developed by the Linde Air Products Co., Unit of Union Carbide Corp., New York City. Known as Oxweld No. 25 M., this bronze rod is said to speed the welding operation and to make it easier to produce welds of uniformly high quality. The flux melts into the weld continuously and in the right quantities, leaving no wasteful residue on the face of the weld, according to the manufacturer. Thorough tinning is said to continue without interruption.

Use Free Postcard For More Details.

P269. Standard Spring Washers

The Reliance Division of Eaton Mfg. Co., Massillon, Ohio, has announced a complete line of spring lock washers produced in compliance with the standards adopted by the American Standards Assn., and known as "American Standard Spring Lock Washers." This product is guaranteed to meet both ASA and SAE specifications.

Use Free Postcard For More Details.

(TURN TO PAGE 168, PLEASE)

Water poured on burning flammable oils, lacquers or other flammable liquids may spread the flames . . . endangering surrounding materials. A flexible and fast acting agent on such fires is—

PYRENE FOAM—**available in portable, wheeled and stationary equipment—smothering foam that covers the surface of burning liquids as well as ordinary combustibles. The new air foam made at the nozzle of the Pyrene Foam Playpipe or in fixed installations from Pyrene Foam Compound and plain hydrant or salt water, forms a free-flowing, oxygen-excluding liquid blanket which quickly covers the burning liquid or solid and extinguishes the fire.**

STANDARDIZE ON PYRENE PROTECTION

There is Pyrene fire protection equipment for every hazard.

In addition to Foam there are Pyrene Vaporizing Liquid extinguishers for all classes of fire in their incipiency; Pyrene Soda-Acid, Pump Tank and cartridge-operated Water and Anti-Freeze types for ordinary combustibles; installations for special hazards; Pyrene G-1 Powder for burning potassium, sodium and magnesium.

Let a Pyrene jobber check your fire risks. He'll be glad to show you the best protection methods with no obligation to you.

Pyrene Manufacturing Company
NEWARK 8 NEW JERSEY
Affiliated with the C-O-Two Fire Equipment Co.

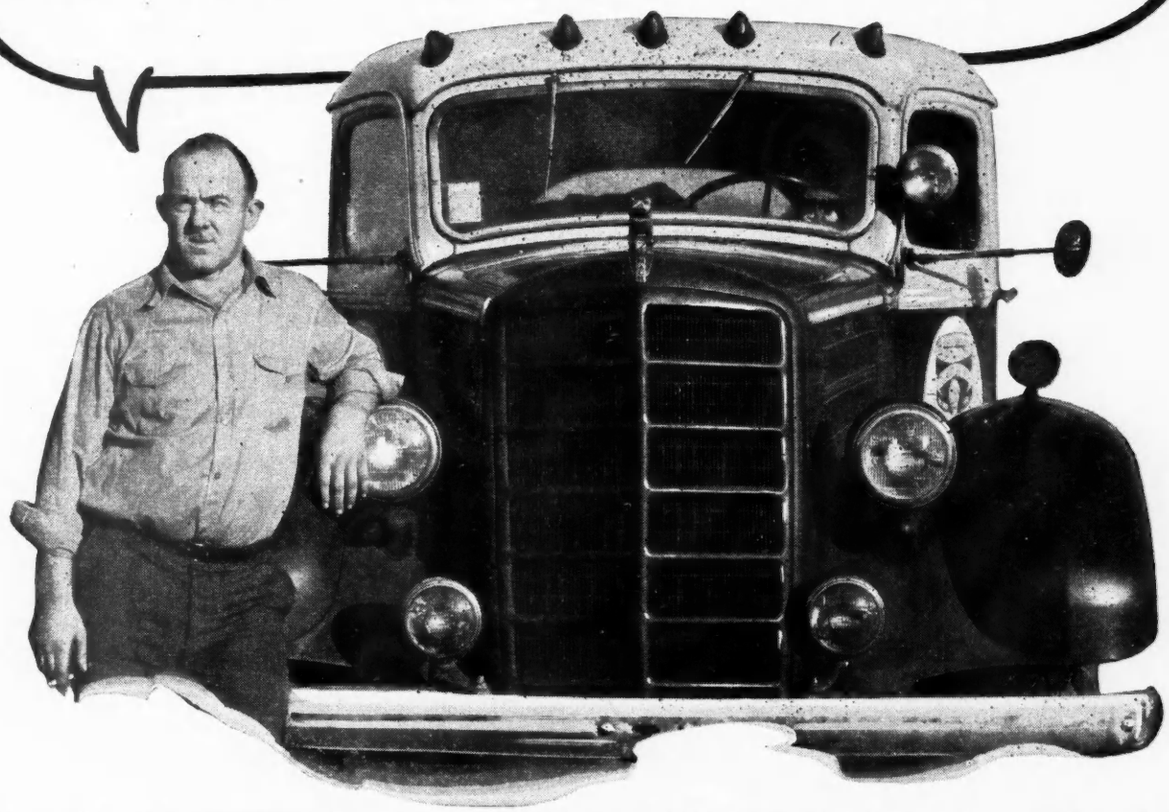
● WHAT IS IT?

ANSWER . . . (To Question on P. 164)

Gymkhanas, popular in the 1900's, were field day stunts staged to demonstrate how easy it was to drive the automobiles of that day.

(Another Cartoon Quiz on P. 168)

BEST TRUCK IN OUR FLEET SINCE WE INSTALLED TOLEDO DIATROL PISTONS!



Says Jos. Young, Shop Foreman, Chef Boy-Ar-Dee Quality Foods, Inc., Milton, Pa.

● Here's what the shop foreman of one of the largest food manufacturers in Pennsylvania, operating a large fleet, has to say about a set of Toledo Diatrol pistons installed in one of the Company's trucks: "This truck is used on a run to Cleveland, round trip 600 miles. It has over 40,000 miles on it since the Toledo Diatrol pistons were installed. Gasoline mileage is better than any truck in the fleet. And the truck has more power than when it was new. You can bet your bottom dollar that we will continue to use Diatrols."

Yes, fleet operators all over America are saying that the new Toledo Diatrol pistons are the most sensational advance in aluminum piston history. Because this piston saves oil, eliminates scuffing and scoring, wears longer, and gives the most accurate control of thermal expansion of any piston on the market today.... Ask your nearest Toledo distributor for further details about patented Toledo Diatrol pistons, or write to us direct.

The TOLEDO

STEEL PRODUCTS COMPANY • TOLEDO, OHIO, U. S. A.
SINCE 1906

Makers of Fine Automotive and Aircraft Parts

NEW PRODUCTS

(CONTINUED FROM PAGE 166)

P270. Triple-Core Solder

Tri-Core, a solder with three independently filled cores of pure rosin flux is a new development of Alpha Metals, Inc., Brooklyn, N. Y. This product is said to offer users faster soldering and to eliminate dry joints.

A continuous supply of non-corrosive rosin flux is always present. The arrangement of the three cores places them closer to the surface, allowing the heat to penetrate more quickly and allowing the flux to flow freely. Cross-sectional proportioning and the absence of surface seams prevent premature sweating out of the flux, making it clean to handle at all times, according to the manufacturer.

Use Free Postcard For More Details.

P271. Economical Parts Washer

A new parts washer, in which air pressure is used to agitate cleaning

fluid, recently has been announced by Park Chemical Co., Detroit, Mich.

Priced at $19.95, this new easy-to-use unit features a pipe-line system of outlets within the tank from which compressed air is released to set up a strong agitation of the cleaning fluid. Any air compressor already in use is adequate because this unit operates on less than 1 cu. ft. of air per min.

Furnished with each washer is a wire dipping basket for small parts. Larger parts may be placed directly in the tank itself. Tank dimensions are 14¾ x 14¾ in. by 8 in. deep. Capacity is 5 gal. of cleaning fluid.

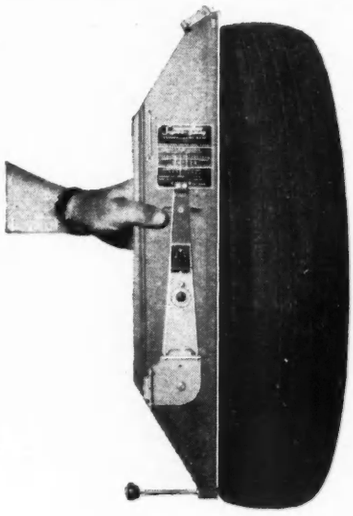
Use Free Postcard For More Details.

P272. Improved Line of Filters

Complete car coverage on filters is now made possible by a recently

(TURN TO PAGE 171, PLEASE)

New Super-Easy
CAMBER-CASTER GAGE
(PATENTED)



THE ONLY GAGE THAT HAS A BUILT-IN FLOOR SLOPE COMPENSATOR

LOW-PRICED

Handiest camber-caster gage ever invented. Designed for the mechanic who wants a simple, inexpensive device for doing the job quickly and accurately.

The only gage that has a built-in floor slope compensator. (Patented.) Once the gage is set to the floor slope, the slope is automatically compensated for in all readings.

DOES THE JOB IN ⅓ THE TIME

FASTER
Checks floor slope and one wheel for CAMBER in 30 seconds.
Checks floor slope, CASTER and CAMBER on both wheels in 3 minutes.

LIGHTER
Weighs only 3 lbs.

SMALLER
Only 24 inches long

MORE ACCURATE
Automatically compensates for floor slope

Write for Literature

MICRO-LINOR SERVICE CORP'N
1621 W. Fort St. Detroit 16, Mich.

Answer on Page 171

NEW PRODUCTS

(CONTINUED FROM PAGE 168)

rounded out line of "Filterettes" manufactured by Hygrade Products Co., Long Island City, N. Y.

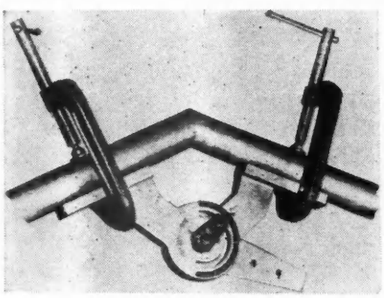
Filters protect the carburetor overhaul job and at the same time insure against sudden stalling on the road through carburetor failure due to dirt clogging.

Hygrade's line of Filterettes, with glass or metal bowls, comprises 15 numbers in three sizes—a filter for every requirement. Special Filterettes in small sizes are furnished for installation in confined spaces.

Use Free Postcard For More Details.

P273. Welders' Holding Clamps

A new type holding clamp called the Duo-Square, has been developed by McFerron-Myers Products Co.,



Cleveland, Ohio. This clamp, manufactured in three models and in a wide range of sizes is designed to hold work while welding, soldering, brazing, nailing and other joining processes. The adjustable model, illustrated, can be used to join parts at any angle from 0 to 180 deg. This model comes in three sizes with 2½-in., 4 ½-in. and 6½-in. faces.

The clamping faces of the Duo-Square Ninety model are machined and grooved to a true 90-deg. angle. Face sizes are 2½, 4½, and 6½ in. The straight model holder has two straight lined grooved faces machined for accurate butt joining. Face sizes are the same.

Use Free Postcard For More Details.

P274. Decarbonizing Cleaner

Magnus 755 metal parts cleaner, made by Magnus Chemical Co., Inc., Garwood, N. J., is now available to the fleet field. This new compound is said to be a fast, effective solution for removing accumulated deposits of carbonized oil, grease and dirt from metal parts.

For ordinary work, the cleaner used at room temperature will provide degreasing action. Cleaning can be speeded, however, by heating the solution to 150 deg. Fahr. Magnus 755 is said to be safe for use on any kind of metal. Fire hazard is practically eliminated. It is non-corrosive to metals and will not injure leather or fiber gaskets, according to the manufacturer. The solution can be used over again.

Use Free Postcard For More Details.

(TURN TO NEXT PAGE, PLEASE)

● WHICH IS IT?

ANSWER . . . (To Question on P. 168)

A blue line indicates butyl. Butyl tubes are said to be as durable as natural rubber if not more so, and they hold air ten times longer. That implies that they would need to be inflated only 4 or 5 times a year.

(Another Cartoon Quiz on P. 172)

KEEP THE "BIG BABIES" ROLLIN'

with RUSCO Heavy Duty Fused Fabric Clutch Facings

CLUTCH facings take a lot of punishment on big-tonnage trucks and heavy-laden buses. That's why it pays to use the famous RUSCO *Heavy Duty* Fused Fabric Clutch Facings . . . the clutch facings proved and improved on trucks, jeeps, ducks and all manner of Army vehicles. The extra strong, woven asbestos base of these *heavy duty* facings is impregnated with wear-resistant solids and moulded under tremendous hydraulic pressure. The result is an "interlock" of ingredients which gives these burly facings exceptionally high mechanical strength, torque for all requirements, resistance to heat, oil and moisture, and a long and trouble-free life under severest operating conditions.

RUSCO ★★ ENGINEERED ★★ BRAKE LININGS CLUTCH FACINGS

Passenger Car and Heavy Duty Brake Linings and Clutch Facings

The RUSSELL MANUFACTURING CO., Middletown, Conn.

NEW PRODUCTS

(CONTINUED FROM PAGE 171)

P275. Battery Filler

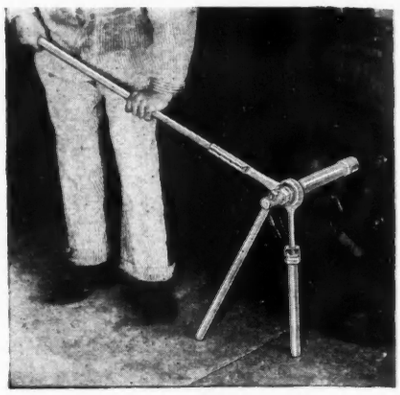
Featuring an extra-long nozzle to to provide easy access to hard-to-reach batteries, a new all-rubber filler has been introduced by The Sun Rubber Co., Barberton, Ohio.

Designed to stand up under the deteriorating action of acids and petroleum products, the new filler is said to retain its shape because of an interior reinforcing band that offers greater resilience. Positive leak-proof action is said to be another feature.

Use Free Postcard For More Details.

P276. Budd Wheel Wrench

A new tool which employs the power derived from a gear and pivot arrangement to loosen the inner and outer nuts on Budd dual wheels is manufactured by the B. K. Sweeney Mfg. Co., Denver, Col.



This "Powerench" is composed of an outer wrench, with hex end, an inner wrench, with square head and a two-piece handle. An outer small gear attached to the outer wrench turns and crawls around the large gear on the inner wrench. It applies power in approximately 3 to 1 ratio to the outer nut.

The new wrench is self-supporting when it is mounted on the nut assembly. The manufacturer points out that the tool does a double duty—by reducing the chances of loose wheels and by enabling one man to remove the tightest nuts without the use of welding torches. The tool weighs 15½ lb.

Use Free Postcard For More Details.

(TURN TO PAGE 178, PLEASE)

● Marquette Engineers' latest triumph . . . INSTANT Arc Striking *without* extra high frequency or booster gadgets. Model 262 C has built-in capacitor for high power factor. Its wide range of 20 to 275 amperes takes all automotive welding jobs in stride from light fenders to heavy truck and trailer frames. New Telnic Bronze plugs and sockets doubles current carrying capacity. Generous use of aluminum increases transformer efficiency. Models: 262 and 262 C, 20—275 amps.; 261 and 261 C, 20—200 amps.

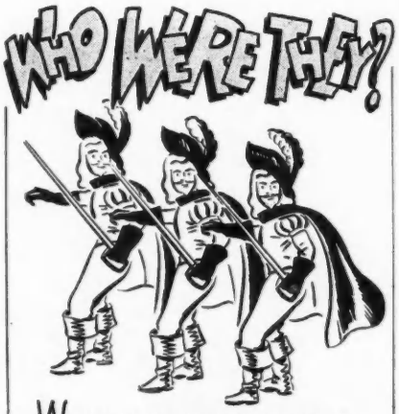
LOOK TO MARQUETTE FOR LEADERSHIP

MARQUETTE WELDING EQUIPMENT SOLD EXCLUSIVELY THRU THE NATION'S LEADING DISTRIBUTORS

MARQUETTE
REGISTERED U.S. PAT. OFFICE
Welding
EQUIPMENT

A.C. ARC WELDERS · ELECTRODES
GAS WELDING And CUTTING EQUIPMENT
ACETYLENE GENERATORS · ACCESSORIES

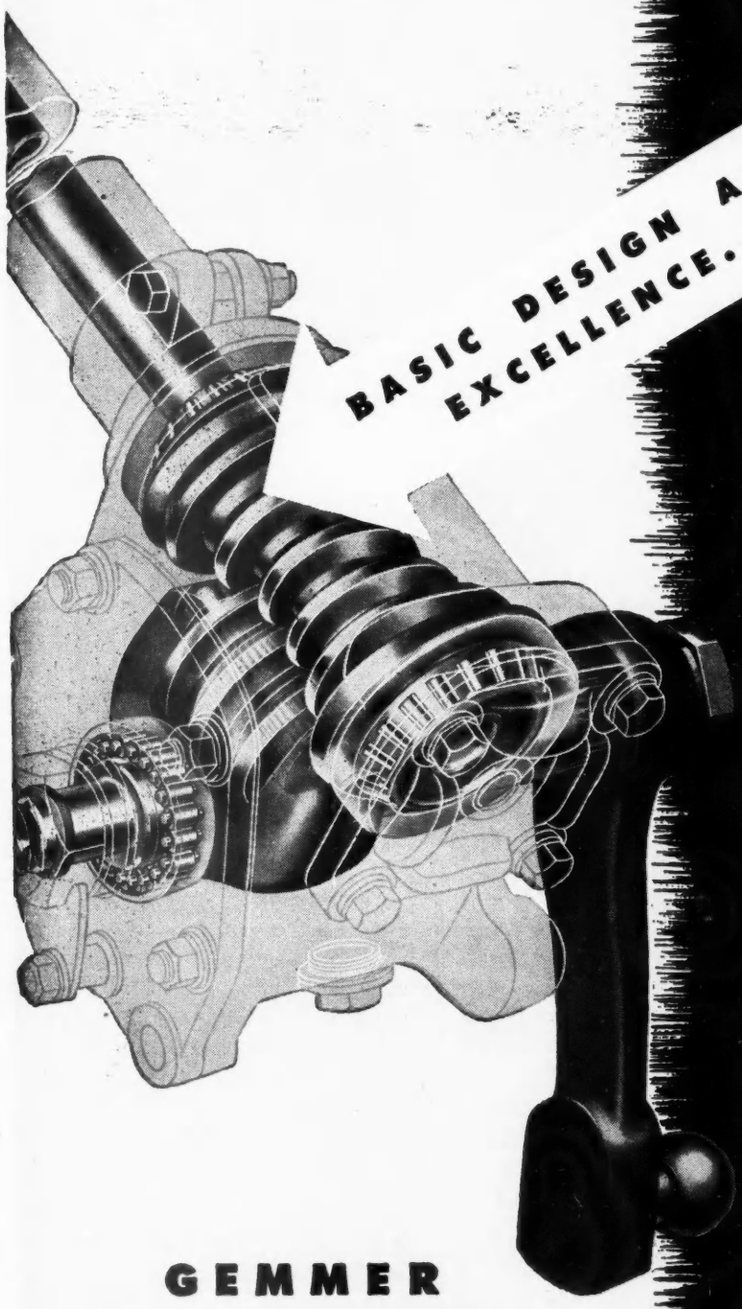
MARQUETTE MFG. CO. INC.
MINNEAPOLIS 14, MINN.



WHAT ENGINEERING TEAM BECAME THE FAMOUS THREE MUSKETEERS OF CHRYSLER CORP?

☐ KETTERING, MIDGLEY + BOYD
☐ ZEDER, BREER + SKELTON
☐ TINKER, EVERS + CHANCE
☐ HART, SCHAFFNER + MARX

Answer on Page 174



BASIC DESIGN ASSURES STEERING EXCELLENCE...LONG SERVICE

GEMMER STEERING

Note the basic design of the Gemmer Steering Gear. An hourglass worm engages gear teeth that *roll*. Anti-friction bearings are placed at all critical points. Absence of sliding friction provides highest efficiency—easiest transfer of power—easy steering with plenty of power for parking.

Design and construction are also exceptionally sturdy and compact—providing abundant strength, long endurance—ease of installation—saving of weight without sacrifice of overall capacity or steering arm angularity. Alloy steel forgings provide ample safety factor. Internal stresses are low.

A Gemmer Steering Gear will last, and *give satisfaction* for the life of the vehicle.

Simple:—Just a few parts—nothing complex—nothing to get out of order or require frequent adjustment.

Stable:—No "lost motion"—wear reduced to least possible minimum. Steering is always firm, responsive, positive with absence of rubbery feeling and—wander.

Gemmer Steering is demonstrating its worth in every type of automotive vehicle from the lightest passenger cars to the heaviest buses and trucks—in the road-building machinery, agricultural tractor, and marine fields.

GEMMER
MANUFACTURING COMPANY
6400 MT. ELLIOTT
DETROIT 11, MICH.

GEMMER . . . Pioneer of Efficient Steering

NEW PRODUCTS

(CONTINUED FROM PAGE 172)

P277. Liquid Repair Seal

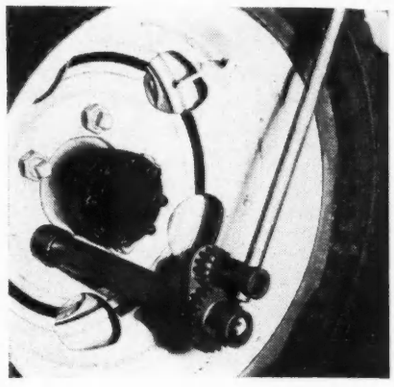
A new and improved liquid repair seal, known as Everman's Likwid Repair, is announced by the Everman Products Co.. Chicago.

The liquid has shown increased capacity for sealing heat or freeze cracks in blocks, heads and cooling systems, according to the manufacturer. The solution also shows a greater capacity to withstand and absorb vibration, the company states.

Use Free Postcard For More Details.

P278. Wheel Wrench Set

A new OTC Budd Wheel Wrench Set, manufactured by the Owatonna Tool Co., Owatonna, Minn., is said to make wheel removing easier. The set includes an outer socket, an inner socket which slides inside the outer socket, an outboard jack support, a 28-in. bar and a 1¾-in. box



wrench with a 36-in. detachable bar handle.

In use, the 28-in. bar is placed as a stop against the ground, thus holding the inner wrench and inner cap nut in place without turning while the outer cap nut is removed. The outboard jack support for the end of the wrench is easily and quickly adjustable for height with a self-locking arrangement.

Use Free Postcard For More Details.

P279. Adjustable Horses

A comprehensive line of all-steel garage horses, with capacities of 3, 6 and 8 tons, to meet the needs of light, medium or heavy-duty truck service has recently been placed on the market by Associated Producers, Inc., Detroit, Mich.

The horses are adjustable to 5 or 6 heights, ranging from 12 in. to 22 in., depending upon the model. An adjusting pin of heardened steel, which holds the movable cylinder at any desired height, is stressed by the manufacturer as an important safety feature because it is out in the open where it is clearly visible.

Among other features is a V-shaped load rest that prevents slipping, and distributes the load uniformly over the frame members. It is also pointed out that, because of its inclined legs, the horses can be placed close to the end of the axle.

Use Free Postcard For More Details.

(TURN TO PAGE 178, PLEASE)

. . . TO MAKE YOUR SPRING COSTS DROP

Here's a positive, definite way to cut spring costs—proved by many fleet operators. *Put your vehicles on a regular program of spring inspection.* Be sure to have this work done in a qualified shop—by a Rowland Spring Distributor. Knowing springs—how to make them deliver a full lifetime of service, what to look for that might cause premature failure and how to prevent serious trouble—is the business of Rowland Spring Distributors—and they're good at it. They have a wealth of practical experience gained over the years in working on thousands of trucks and buses. Use your nearby Rowland Spring Distributor for SPRING, muffler, universal joint and wheel suspension service. Wm. & Harvey Rowland, Inc., Frankford, Philadelphia 24, Pa.

Call nearest Rowland Distributor. He's supplied by these branches:

ATLANTA 3, Ga., William and Harvey Rowland, Inc., 449 Marietta St., N. W.

BIRMINGHAM 3, Ala., Birmingham Spring Service, Inc., 2017 Avenue B, South

CHICAGO 16, Ill., William and Harvey Rowland, Inc., 2732 Indiana Avenue

JACKSONVILLE 4, Fla., Jacksonville Spring & Alignment Co., 137 Jefferson St.

PHILADELPHIA 30, Pa., William and Harvey Rowland, Inc., 1414 Fairmount Ave.

PITTSBURGH 13, Pa., Point Spring Co., 419 Melwood Street

ROWLAND SPRINGS CERTIFIED ALLOY STEEL ROWLAND SPRINGS Est. 1795 **SPRINGS • MUFFLERS • UNIVERSAL JOINTS • WHEEL SUSPENSION PARTS**

● WHO WERE THEY?

ANSWER . . . (To Question on P. 172)

Fred Zeder, Carl Breer and Owen Skelton—a trio of engineering geniuses who were behind most of the innovations brought out by Chrysler in the past two decades.

Power Pump Dependable

WALKER "KNOW-HOW" ASSURES HIGH EFFICIENCY AND LONG LIFE IN THIS SMALL BUT VITAL PART

● Every time you push down on the handle of a Series 900 portable hydraulic, the power pump converts your gentle down-stroke into a powerful up-boost on the load you're lifting.

Converting *pounds* of handle push into *tons* of load lifting power requires a hydraulic system that can withstand high pressures. It means that the piston in the power pump must be engineered and built to move smoothly up and down—*without leaking*—many times each time you lift a load.

That's why the pump piston in a Walker Series 900 is precision-made from selected cold-rolled steel. That's why it is "snug-fit" into the pump barrel and oil-sealed with a strong, specially impregnated cup leather. And that's why you're sure of long-lasting, high efficiency operation from a Walker.

It takes Know-How to build such features into a jack—Know-How that comes only from years of making jacks that set the standard of dependability in automotive lifting equipment. And it's this Know-How that makes Walker the leader in jacks.

Powered by *Hydroyl-50*

To make sure every Walker hydraulic jack starts life right, it is factory-filled with **Hydroyl-50**—an **oil-alloy** compounded by Walker of special costly ingredients which protect vital parts from interior corrosion and preserve cup leathers. It will pay you to use Hydroyl-50 in all your hydraulic jacks—regardless of make.

THE FAMOUS WALKER SERIES 900 PORTABLE HYDRAULIC JACKS, from 3 to 50 Tons Capacity

WALKER MANUFACTURING COMPANY OF WISCONSIN • RACINE, WISCONSIN

Also Makers of Walker "Individually Tuned" Exhaust Silencers and Electric Lifts

LEADS IN JACKS

NEW PRODUCTS

(CONTINUED FROM PAGE 174)

P280. Metal Cabinets

C. E. Niehoff & Co., Chicago, Ill., is now offering three stock control metal cabinets. This Niehoff system of stock control saves mechanic's time locating ignition parts, cuts inventory losses, eliminates errors in ordering and speeds up service. One simplified code covers all ignition systems.

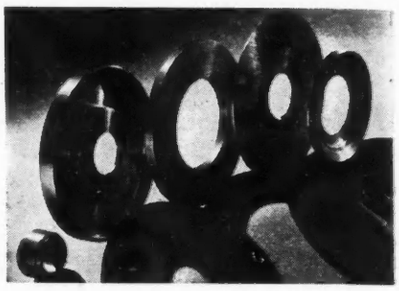
Cabinet is of welded construction with high enamel finish, and comes completely set up. Sections can be added as needed.

Use Free Postcard For More Details.

P281. Viscous Damper

The Houde Engineering Division of Houdaille-Hershey Corp. has announced a new type of Viscous Torsional Vibration Damper for internal combustion engines.

Only three parts go into the construction of this new damper: the



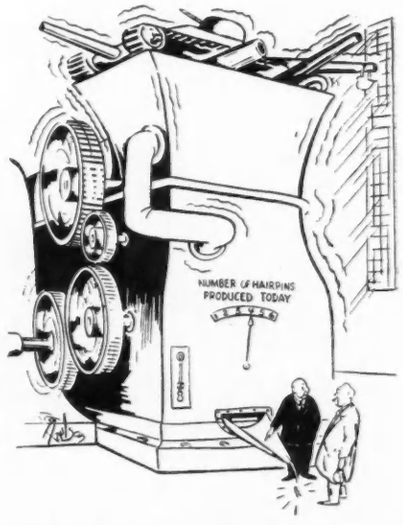
damper mass, its housing and a bronze bushing. The viscous substance employed is the newly-developed Silicone fluid, chosen for its inherent stability and its nearly flat viscosity curve which permits constant operating characteristics regardless of temperature ranges or changes. The housing is hermetically sealed to retain the fluid indefinitely.

This new device is a true damper and not a detuner. The housing is attached rigidly to the engine crankshaft while the inner, free-running damper mass, in reality a flywheel, is separated from it by a thin film of the Silicone fluid. Because of the high viscosity of this fluid, the damper mass rotates at engine speed. When the minute plus and minus changes in velocity which produce vibration are transmitted from the crankshaft to the housing, the damper mass or flywheel, being heavy in comparison, tends to continue to rotate at constant speed. Thus the vibrations are damped by the drag of the viscous fluid separating the two parts and its resistance to the shearing action.

Use Free Postcard For More Details.

(TURN TO PAGE 182, PLEASE)

America's largest independent line of high quality Automotive Replacement Universal Joints and Parts: Neapco-Ford-Chevrolet, Neapco-Spicer, Neapco-Cleveland, Neapco-Detroit, Neapco-Mechanics, and Neapco Power-Take-Off Joints. Ask your Jobber for "Ne-ap'-co" Products.
TRADE
NEAPCO
MARK
UNIVERSAL JOINTS & PARTS
NEW ENGLAND AUTO PRODUCTS CORPN.,
POTTSTOWN, PA., U. S. A.



"This is the Government's latest plan for Surplus Property disposal. For every ton placed in the hopper, out comes ONE HAIRPIN!"

Extra Tough SERVICE REQUIRES *Extra Tough* SHOCK ABSORBERS . . .

SO THEY INSTALLED "CLE-AIRS"

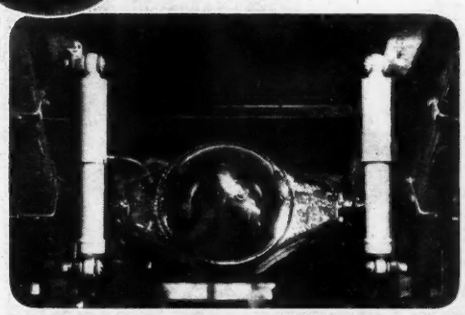
Newspaper delivery service is notoriously tough on vehicles. So the Call-Chronicle Newspapers of Allentown, Pa., to insure maximum protection, installed CLE-AIR spring control units, front and rear, on their Model W14 trucks. Here are a few of the reasons why they selected CLE-AIR units:

1. HEAVY DUTY TYPE. CLE-AIRS are not "passenger type shocks" adapted to fleets, but rugged units specifically designed for rigorous usage on trucks and buses. Built to aircraft tolerances, CLE-AIR units, when properly serviced, *last as long as the vehicle.*

2. EASY, LOW-COST MAINTENANCE. Checking the hydraulic fluid level every 15,000 to 20,000 miles is the only service normally required. This takes but a few seconds with the convenient filler plug. One operator reports his CLE-AIR units have gone 100,000 miles at a cost of only 15c apiece for oil.

3. SAFE, SMOOTH RIDE CONTROL. Identical in principle with our famed Aerol landing gear that safely land 80-ton aircraft, CLE-AIR units are dual-acting—hydraulic and pneumatic. This unique principle efficiently absorbs all shock and recoil, protecting the vehicle and producing a comfortable ride of unmatched smoothness.

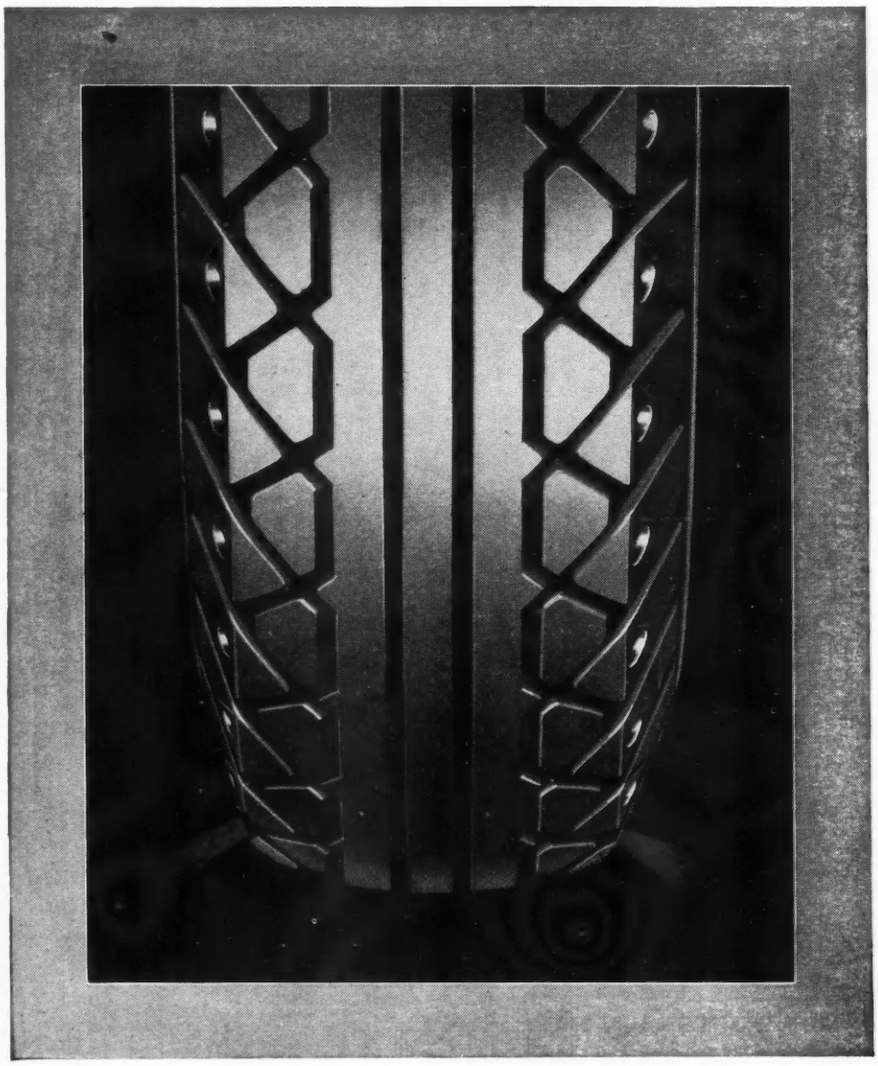
Free booklet tells all the facts on CLE-AIR units. Ask for it!



A typical installation view of CLE-AIR units.

THE CLEVELAND PNEUMATIC TOOL CO.
AUTOMOTIVE DIVISION — CLEVELAND 5, OHIO

Wears



The Only Heat-Vented

Longer

PROVED IN BOTH KINDS OF RUBBER!

The Exclusive Seiberling Heat-Vent has proved itself one of the most important tire design improvements of all time! *It is the ONLY effective method of dissipating internal friction heat—tire enemy Number One!* Because they *run cooler,* Seiberling *Heat-Vented* Tires—in *both* natural and synthetic rubber—*wear longer, take more recaps and cost less per mile.* That has been *proved* on thousands of trucks in all kinds of service. It *can* be proved on *your* trucks. Seiberling Rubber Company, Akron, Ohio; Toronto, Ontario, Canada.

SEIBERLING

Truck Tire

NEW PRODUCTS

(CONTINUED FROM PAGE 178)

P282. Air-Operated Vise

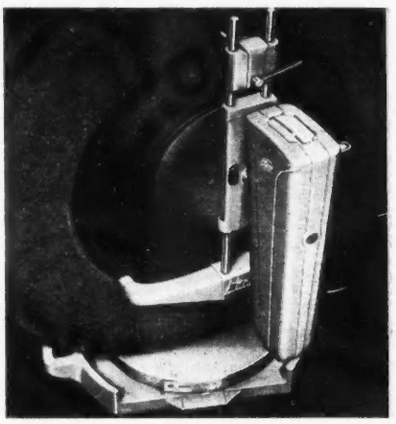
The Bryant Products Co., Jackson, Mich., announces a new 40 to 1 ratio pneumatic pressure vise for holding, punching or for press work. The unit comes equipped with a regulator valve so that the movable jaw pressure can be set to get any desired pressure up to 4000 lb. The jaws can be replaced with pipe jaws, punches and dies to accommodate the work. The jaws are 5 in. wide by 2½ in. deep, and open to 8 in.

The vise is operated by toe touch through a 3-way foot valve. It is not recommended for air pressures over 150 lb. per sq. in.

Use Free Postcard For More Details.

P283. Camber Caster Gage

A new streamlined portable camber, caster and king pin angle gage



developed by the John Bean Mfg. Co., Lansing, Mich., is attached quickly and is said to provide accurate readings when the vehicle is sitting on a level floor. This gage, Model 13, is secured to the wheel with a three-point contact clamp, and once in place, can be left there during the movement of the truck.

The enclosed pendulum indicates the angles on two large, easy-to-read scales. The caster and king pin angle scale is adjusted by a radio-type control knob on the housing. All parts are aluminum die castings. The gage weighs only 4¾ lb.

Use Free Postcard For More Details.

P284. Light Tow Cable

The Bulldozer Tow Cable just announced by the Wire & Cable Division of the Wind Turbine Co., West Chester, Pa., is light in weight, inexpensive and can be clamped on any car or truck in an instant without tools. Jaws secured by the Pres-Tite cold forged, rust resisting, cable connectors clamp around any bumper and are secured by tightening a wing nut to a snug hand fit.

The Bulldozer provides a full bumper-to-bumper hitch. All parts are thoroughly galvanized and otherwise protected against rust. The popular size has a minimum breaking

(TURN TO PAGE 186, PLEASE)

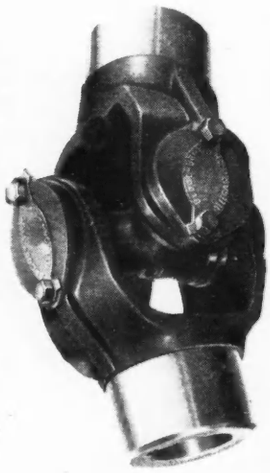
EQUIPPED WITH BLOOD BROTHERS
UNIVERSAL JOINTS

Operating from a single turntable engine, this 20-ton, self-propelled giant crane can simultaneously hoist, swing and travel — an engineering feat in which Blood Brothers Universal Joints play an important part.

There is a Blood Brothers Universal Joint designed to meet practically any out-of-line transmission need — their simple design, sturdy construction and great torsional capacity assure economical, long-life service.

We welcome your problems for study by our engineers.

Engineering data furnished: Specifications on all Blood Brothers Universal Joints and engineering data. Write Dept. 12.



BLOOD BROTHERS
UNIVERSAL JOINTS

BLOOD BROTHERS MACHINE COMPANY
DIVISION STANDARD STEEL SPRING COMPANY
ALLEGAN, MICHIGAN

A sample of the new metal seal adapted by Bendix - Westinghouse to mark all genuine units (both new and factory reconditioned) of the air brake system. Red identifies new equipment and yellow, the factory reconditioned part

Across the Nation

—your NAPA Jobber (like every NAPA Jobber) has ready for you the same trusted lines—the same superior service. Every NAPA Jobber has the advantage of an organized system of supply and operation, which simplifies his problems—gives him more time to help you with yours. He is part of the largest independent parts organization in the industry—yet wherever you may be, you'll find him just as friendly and cooperative as the corner drug store, because he's an independent business man, working to get ahead by giving you the fastest and finest service on parts for all makes of cars, trucks, tractors.

NAPA

is the largest Independent Parts Organization in the Industry!

N·A·P·A
National Automotive Parts Association
Assurance of Quality

American Brakeblok — BRAKE LINING · CLUTCH FACINGS · FAN BELTS · RADIATOR HOSE
Allied WISCONSIN — PISTONS · SLEEVES
Spicer — UNIVERSAL JOINTS
MONMOUTH PRODUCTS — ENGINE BEARINGS · CLUTCH PARTS · BOLTS AND BUSHINGS
TRICO — VACUUM OPERATED SAFETY PRODUCTS
Allied GRAPHO — WATER PUMPS · PARTS · PACKING
BROWN LIPE — GEAR BOXES
BALKAMP — PARTS FOR FORD · CHEVROLET · PLYMOUTH
Buffalo — MUFFLERS
MicroTest — GEARS · AXLE SHAFTS
Allied A.P.C. — VALVES
STANDARD — GREASE RETAINERS
DETROIT — UNIVERSAL JOINTS
DITTMER — TRANSMISSION GEARS
Allied RAYMOND — VALVE SPRINGS
RARITAN — ROLLER BEARINGS
New Britain — HAND TOOLS
ECHLIN — IGNITION PARTS
Allied CELORON — TIMING GEARS
Allied PRECISION — PISTON PINS
DUCKWORTH — TIMING CHAINS
PURITAN — BRAKE FLUID
MARTIN-SENOUR — AUTOMOTIVE FINISHES
Belden — WIRE AND CABLE
DOUBLE DIAMOND — FLYWHEEL GEARS
FEDERAL — BALL BEARINGS
UNITED — PARTS FOR HYDRAULIC BRAKES · FUEL PUMPS

IF YOU USE FILTERS

(1) *To Improve Engine Performance*
(2) *To Cut Lube Oil Costs*

A Few Cents More For a BETTER FILTER is a Logical Expenditure

A good oil filter is the one accessory that can do more to reduce engine maintenance costs, provide thousands of more miles of satisfactory performance and drastically reduce lube oil bills, than anything else.

A clean engine means less chance of gum and sludge accumulations,—means less mechanical overhauling,—means improved lubrication for longer engine life and fewer oil changes.

Selected on performance and competitive tests by America's foremost builders and designers of gasoline and Diesel engines and motorized equipment,—MICHIANA Filters do the job that a filter is designed to do. They are made with this idea in mind and because of long experience and large production facilities, they cost but little more. For the job they do they really cost you much less.... MICHIANA PRODUCTS CORPORATION, Michigan City, Ind.

Made for engines up to several thousand horsepower capacity—with uniformly high quality engineered replacement cartridge Re-Fills.

MICHIANA OIL FILTERS

NEW PRODUCTS

(CONTINUED FROM PAGE 182)

strength of 2000 lb.—the stress point of the average bumper—and carries a list price of $2.95. Two other types, for 2700 lb. at $3.45 list, and 8000 lb. at $6.95 list, are also available.

Use Free Postcard For More Details.

P285. Fiberglas Blankets

A new line of blankets made with Fiberglas interlining is being produced by Aeronautical Supplies, Inc., New York City. These blankets are used for the transportation of frozen foods by truck and are said to offer a solution to the problem of shipping frozen foods in less than carload lots or for delivering them from the warehouse when refrigerated trucks are not available.

Duck or Vinyl-coated styles are available with waterproof linings. Fiberglas interlined blankets in any size or shape suitable for this type of transportation are now ready for the industry.

Use Free Postcard For More Details.

P286. Light Hydraulic Jacks

A new line of hydraulic jacks known as "Meco Lift Kings" has been announced by the March Engineering Co., Oshkosh, Wis. There are three models, designated as the Senior, the Junior and the Midget. The Senior model, illustrated, has a fully extended height of 41 in. and weights 19½ lb. It is designed to lift a rated capacity of 4000 lb. on the lift hook and 6000 lb. on the top cap.

All models are of steel construction combined with an aluminum alloy, providing high tensile strength. The base is rigid type construction, all models having 34 sq. in. of ground area to support the loads.

Use Free Postcard For More Details.

P287. Silver Chrome Paint

A new natural silver chrome finish in a ready-mixed paint is announced by Alumatone Corp., Los Angeles, Cal. A patented stabilizer used in its manufacture is said to give package stability and to prevent the paint from darkening in the can before opening. The paint is said to hold full brilliance and color at all times.

(TURN TO PAGE 189, PLEASE)

NEW PRODUCTS

(CONTINUED FROM PAGE 186)

Chromatone is packaged ready for use. For indoor or outdoor application on metal, wood, glass and other hard surfaces, the new paint formula is claimed by the manufacturer to have high protective qualities.

This paint sets in 20 min., dries in two to four hours. It is equally suited to brush or spray gun work and dries without leaving brush marks.

Use Free Postcard For More Details.

P288. Floating Grease Seal

A new Tru-Torque Floating Grease Seal has been developed by Otto-Items, Inc., St. Louis, Mo.

This retainer incorporates an auxiliary bearing ring which fits and follows the shaft. Attached to the lip of the retainer, this bearing ring holds the lip in constant contact with the shaft regardless of shaft run-out or movement caused by wheel bearing play.

In the installation of this retainer on an old shaft which might be worn or scored, the lip rests on a different location than the lip on the old retainer thus giving an entirely new sealing surface. This feature is very important as many grease retainer failures are caused by the worn surfaces against which new retainers are expected to seal.

Use Free Postcard For More Details.

P289. Defroster, Ventilator

Wittie Mfg. & Sales Co., Chicago, Ill., is again producing the Wit-eez Auto Fan for all-weather driving safety and comfort.

In the winter, the fan acts to provide clear, full driving vision by defrosting windshield and windows, as well as circulating warmth to rear riders, and expelling smoke without drafts. In the summer, the fan cools driver and occupants, and ventilates without the necessity for wide open windows. During rainy weather, it prevents dangerous fog from forming on windows.

Three 6-in. safe rubber blades are securely anchored in stream-lined nose piece of a high quality motor, developed for auto use, assuring minimum battery drain and non-radio interference. It is controlled by a

(TURN TO NEXT PAGE, PLEASE)

ENDORSED AND USED BY CAR AND TIRE MANUFACTURERS, AND MAJOR OIL COMPANIES.

Fleet owners across the nation find RuGLYDE reduces their tire maintenance costs. This 100% safe, non-petroleum, penetrating rubber lubricant speeds mounting and dismounting of heavy duty bus and truck tires . . . and prevents tire and tube failures. RuGLYDE is recommended and used by major oil and tire companies and leading car manufacturers for two main reasons:

1st, for *dismounting* stuck or rusted tires, RuGLYDE applied to both sides of tire along the edge of bead creeps in rapidly, loosens and lubricates so that removal is accomplished with less time, strain and fatique for the service man, and without danger of damage to the bead and rim.

2nd, tires *mounted* with RuGLYDE give longer service. Pinching and chafing are prevented because RuGLYDE provides proper lubrication to seat tubes and flaps with minimum pressure so that they slip — not stretch — into place. RuGLYDE will not induce rim rust or cause tire static which injures tubes. Harmless to wheel and rim finishes.

It's the scientific, ready-to-use, safe and economical rubber lubricant to *reduce tire and tube failures, — lower labor costs.* Order From Your Jobber Today.

FASTER, SAFER TIRE CHANGING - ECONOMICAL, PAYS FOR ITSELF
MOUNTING — With a small cloth, apply RuGLDYE sparingly to areas of tires, tubes or flaps requiring a wet lubricant.
DISMOUNTING — Apply RuGLYDE to both sides of tire along edge of rim. Allow few minutes for penetration, then proceed with removal.
AMERICAN GREASE STICK COMPANY
MUSKEGON, MICHIGAN

NEW PRODUCTS

(CONTINUED FROM PAGE 189)

specially designed positive action switch. An interchangeable band or clamp bracket insures any type of installation.

Use Free Postcard For More Details.

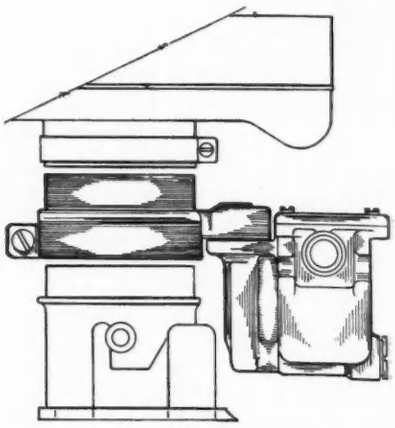
P290. Soft Soldering Flux

A new organic soft solder flux which is described as more effective than common rosin fluxes and which does not normally leave a corrosive residue on the work, is announced by Superior Flux Co., Cleveland, Ohio. This is known as "Superior No. 30 Supersafe Soft Solder Liquid Flux."

Use Free Postcard For More Details.

P291. Water-Alcohol Carburetor

A new water or alcohol-water carburetor called the Vanderpoel is being manufactured by the Exola Products Co., Los Angeles, Cal. With this carburetor a regulated and controlled amount of water, or alcohol-water, is injected through the airhorn of the gasoline carburetor and into the air stream, thus combining the fuel-air mixture.



Water vapor, in mixture with the air and petroleum gases, acts an internal coolant, controlling temperatures and peak pressures, suppresses detonation and pre-ignition, increased combustion time period of the fuel and draws higher power output from the engine. The moisture is flashed into steam in the cylinder at the time of the explosion, contributing power and also dissolving carbonaceous gums from around the rings, valves and plugs.

The company further states that a 10 per cent leaner main fuel metering can be used in the gasoline carburetor, reducing the actual fuel consumption to a minimum of 10 per cent. Greater horsepower, throughout the entire range of engine speeds and load, when burning more air and less fuel, is one of the results obtained from using water injection.

Use Free Postcard For More Details.

P292. Plug-in Test Lamp

A plug-in test lamp for quick, accurate checking has been announced by the Hanlan Co. of Los Angeles.

Wiring, switches, relays, coils, resistors, starters, fuses, generators, ignition systems, and lamps can be checked with the lamp for shorts, open circuits, and grounds. No batteries are needed as the test lamp operates on any 110-volt outlet.

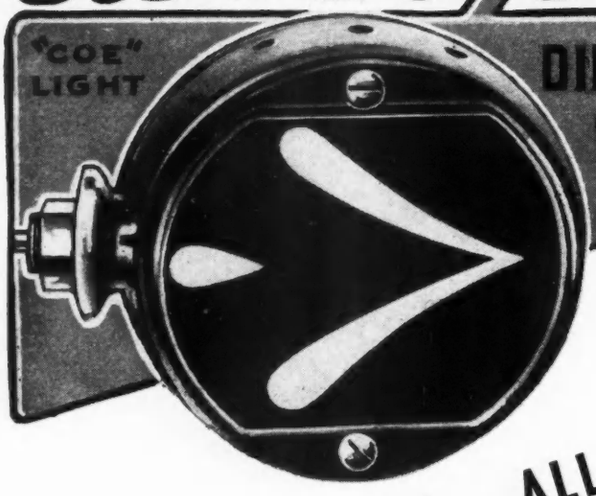
The lamp is supplied with 4 ft. of rubber-covered wire, plastic insulated test prods, socket, and indicator lamp.

Use Free Postcard For More Details.

END

(Please resume your reading on P. 110)

Teleoptic



VISIBLE • FROM • ALL • ANGLES
125 FEET BY DAY; MORE BY NIGHT!

Teleoptic makes the correct Signal Light for every type of vehicle.

Model A-29 illustrated is especially designed for all "Cab-Over-Engine" trucks.

Teleoptic is the recognized quality standard of directional signals.

See your jobber, or write. Ask about entire Teleoptic line of highest quality automotive lighting equipment.

THE TELEOPTIC CO.
1245 MOUND AVENUE RACINE, WISCONSIN

GRAFILD

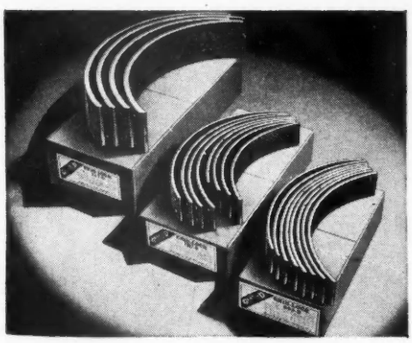
...a *Complete* line of brake linings

GRAFILD "PF" PRESCRIBED FRICTION SETS The correct friction requirements for each particular brake. Selected from highest quality materials, through laboratory and road tests. "Prescribed" or "Engineered for each type brake" to give correct braking performance, greater satisfaction and longer service. Instruction chart in each box contains directions for installation.

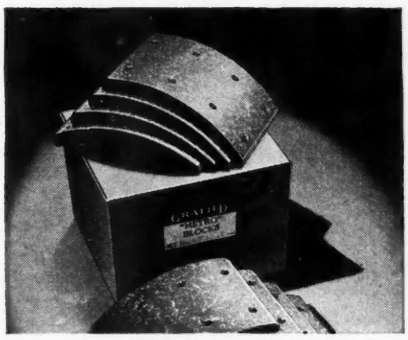
Grafild DeLuxe Woven—A super-quality, dense, high friction brake lining for passenger cars, trucks and industrial applications where greater holding power and maximum resistance to grit, water and oil are required.

Grafild Royal Grid Molded (Rolls) — A top quality molded lining designed for internal brakes. Responds to lighter pedal pressure without grab or excessive fading. Quiet and long-lived.

Grafild Grid Lock Molded—A moderately priced flexible wire back molded lining designed for average service in internal brakes. Non-scoring, positive and smooth in action.



Grafild Grid Lock Sets — Moderately priced, drilled, wire back sets for Ford, Chev., Plymouth and the popular General Motors and Chrysler cars.



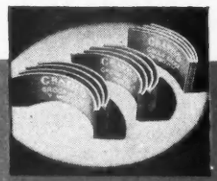
Grafild Hetro Blocks — Type "Y" for all normal service; Type "D" for extreme heat conditions; Type "E" for high speed buses requiring quick stops.

● Send for descriptive catalog showing full details of the Grafild line with car, truck, bus and industrial equipment aplications.

WORLD BESTOS CORP.

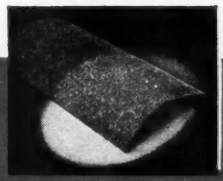
PATERSON • NEW JERSEY

AN OPPORTUNITY FOR PROFIT IN EVERY SET



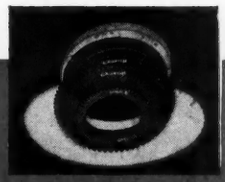
Grafild Truck Group Blocks — for thousands of models of trucks dating from 1933.

Grafild S. I. M. A. Sets — for all types and models of passenger cars and trucks.



Grafild Molded Slabs — available in Hetro "Y" and in Hetro "E" — withstands high temperatures.

Grafild Woven Sheet Stock — the ideal way to stock heavy duty woven brake lining.



Grafild Clutch Facings — available in four types: ST Special, STM Special, Woven and Molded.

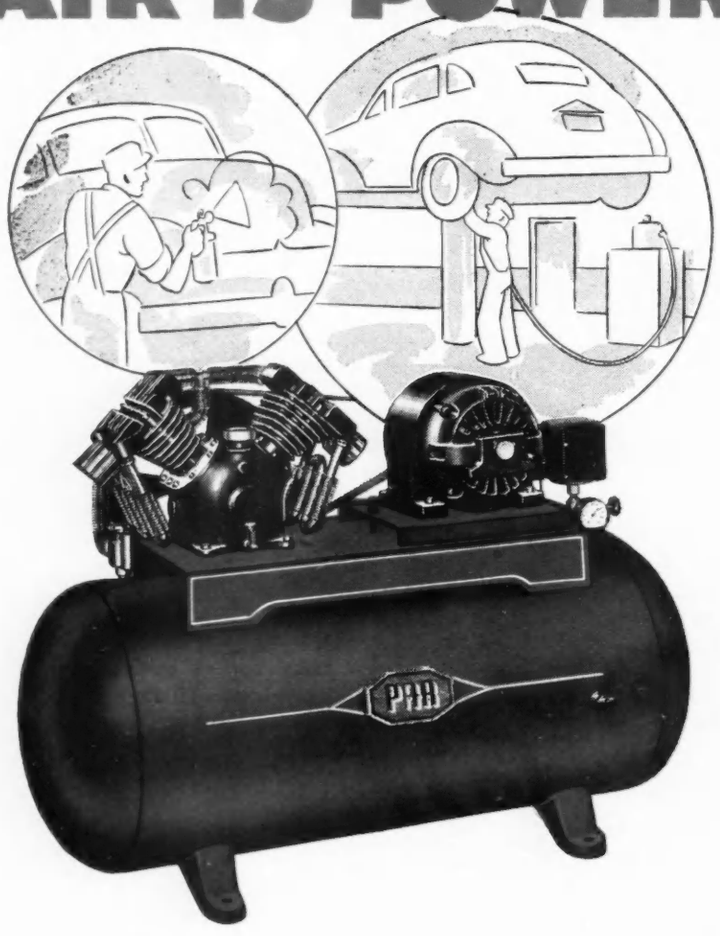
Linn Delivery Coach has Front Drive, Low Floor

A 16-IN.-HIGH unobstructed loading floor and a removable power unit assembly which includes a front-wheel-drive axle are primary features of the Linn Delivery Coach, recently announced by Linn Truck & Coach Corp., Oneonta, N. Y. Other features include an integral body and chassis frame of trussed tubular design, an extremely high ratio of loading area to overall length and height, good weight distribution, torsion bar rear suspension and a silent chain-drive transfer case, first developed by Linn in 1937.

Principal units of the power assembly are of standard make with the exception of the Linn-designed transfer case. All are mounted on a lightweight sub-frame which may be rolled out of the chassis, according to company officials, in 20 minutes and reinstalled in 40 minutes. Operations necessary for removal are as follows: remove four cap screws in back, two in front; disconnect polarized electrical plug containing all connections between instrument panel and power unit; turn off gas supply and disconnect line.

Principal Specifications

BODY AND CHASSIS (integral construction)
Frame: Trussed tubular (monocoque design)
Wheelbase: 138 in. **Overall length:** 232 in.
Unobstructed loading area: Length, 164 in. (plus additional space at side of driver); width, 80 in; height, 76 in.
Rear door: Width, 43 in; height, 72 in.
Side door: Width, 30 in; height 67¼ in.
Floor height: 16 in.
Rear suspension: Lynn torsion bar
Weight, empty: 5010 lb. **Load rating:** 1½ tons
Tires: Four—7:50 x 18
Brakes: Lockheed hydraulic; rear: 17⅛ x 3 in; front: 15 x 2¼ in.
Body: Aluminum construction
POWER UNIT (removable on sub frame)
Engine (standard): Hercules QXC3; 221 cu. in.
Clutch: Lipe Rollway; 12 in.
Transmission: New Process. **Ratios:** Low, 6.4; 2nd, 3.09; 3rd, 1.69; 4th, direct; reverse, 7.82
Transfer case: Lynn design, 4 in. silent chain
Front Axle: Timken-Detroit steering-driving assembly
Radiator: G & O; 20 qt.
Steering gear: Ross
Price: F.O.B. Oneonta, N. Y.: $3,300



Complete power unit including transmission and front wheel drive can be removed in 20 min., assembled in 40

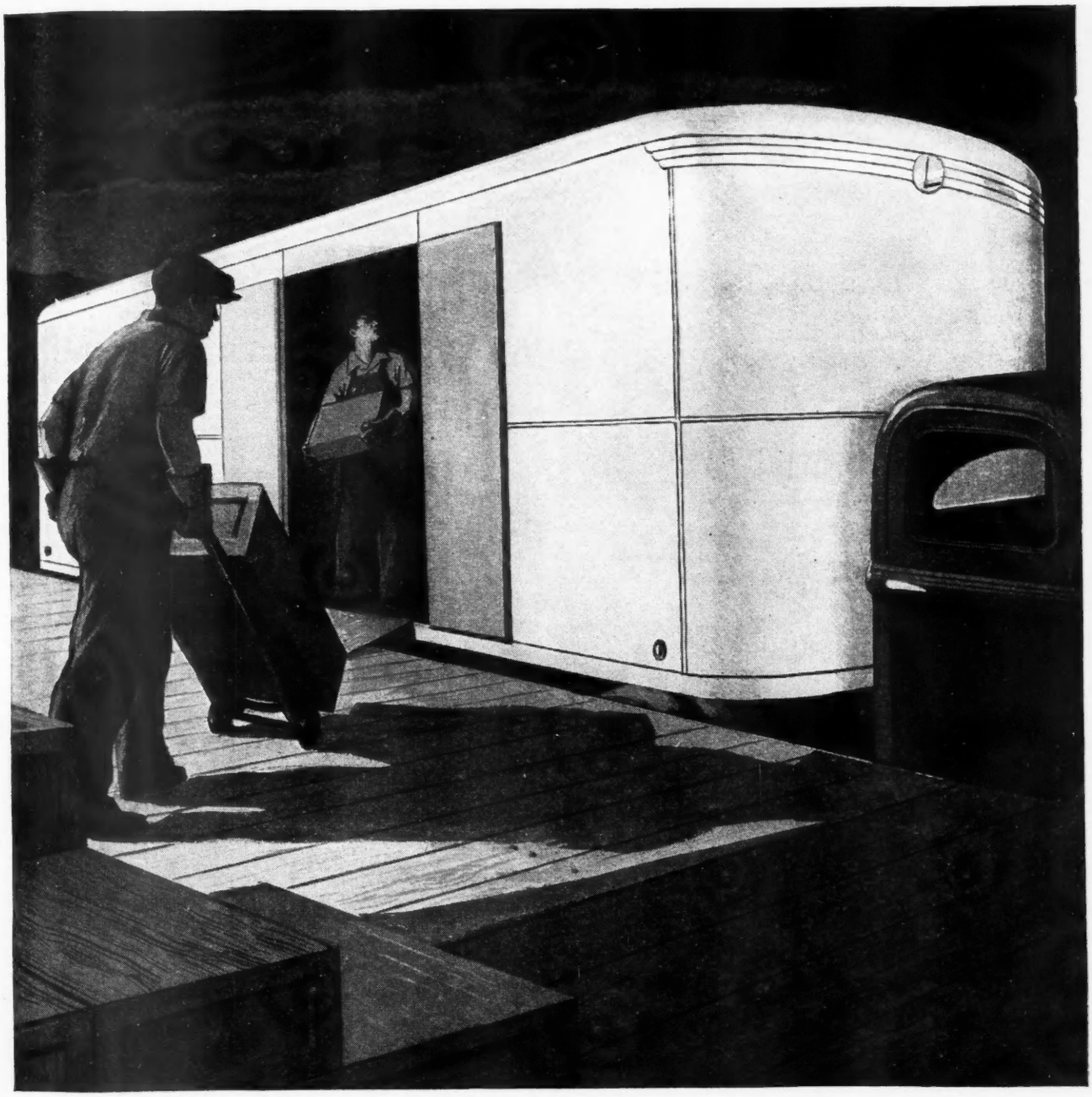
The Linn Delivery Coach in furnished with right-hand drive as standard, left-hand drive optional.

(TURN TO PAGE 194, PLEASE)

AIR IS POWER

DON'T waste time, labor and money with old "Klunker" Air Compressors . . . replace with a new dependable Par, designed and built to give years of quiet, economical and trouble-free service. Par helps speed up service, do a better job, and cut power cost to the bone. Enjoy the advantages of Par "Air Power" —See your Par Jobber or write today for catalog A-46.

Lynch . . . By Comparison — You'll Buy PAR
Manufacturing Corporation
TOLEDO 1, OHIO, U. S. A.



AMERICAN BANTAM "Trade Approved" Trailers are now on the road! Built into them are all the features that trailer men told us they wanted.

We will be in mass production as soon as sufficient materials are available. So keep your eye on American Bantam for "Trade Approved" Trailers... coming soon!

SUPERCARGO

BANTAM

TRAILERS

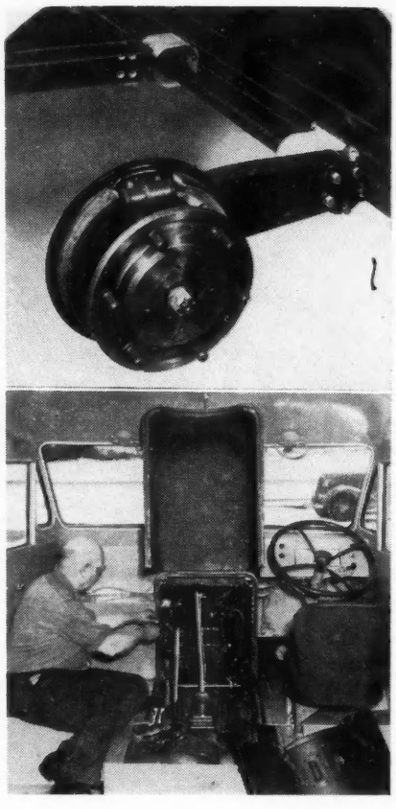
AMERICAN BANTAM CAR COMPANY • BUTLER, PENNA.

LINN DELIVERY COACH

(CONTINUED FROM PAGE 192)

The advantages of either side or rear loading as well as the unusually low loading floor are self evident. Also of note is a comparison with a conventional 1½-ton, 154-in. wheelbase truck of approximately similar loading space and capacity. The Linn unit is claimed to measure 3 ft. 4 in. shorter in overall length, has a 16-in. shorter wheelbase, yet provides about one extra foot of floor loading space. Good accessibility of the engine from inside the cab for minor adjustments is still another feature.

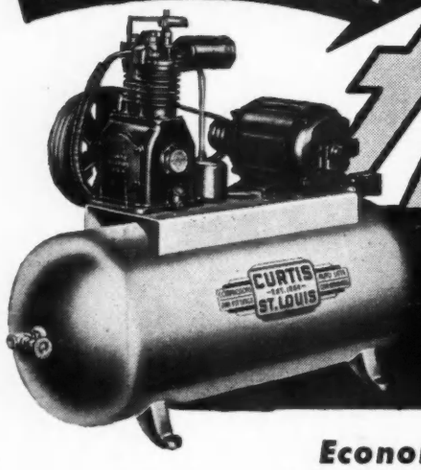
From side door to rear the low floor is obstructed only by low wheel boxes



Center. Close-up of rear torsion bar Above, Engine is readily accessible for maintenance from inside truck

During the war a number of these units served in a variety of fields such as 12-litter ambulances, mobile repair shops for radio and radar and as surgical field hospitals. Now, according to A. R. Perkins, president of the company, tooling is being set up for a production of 10 units per day.

DO BETTER, FASTER WORK with AIR FROM CURTIS COMPRESSORS



Economical . . . Dependable

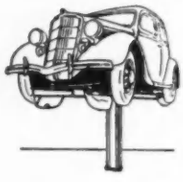
If you have an adequate, dependable supply of air, such as has always been delivered by Curtis Air Compressors, you'll do faster, better work at a lower cost by using the many labor-saving, air-powered tools available today.

Air-powered equipment enables you to do many jobs in as little as *one-third* the time required by hand operated tools.

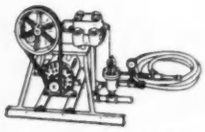
Thousands of automotive service shops have relied on Curtis Compressors for many, many years to deliver an adequate supply of low-cost air with a minimum of maintenance attention or expense. They're built for heavy-duty service and an exceptionally long, trouble-free life.

Curtis engineering advantages include tapered roller-bearings, centro-ring lubrication, centrifugal unloader, carbon-free disc valves—benefits contributing to superior air compressor performance.

Complete information will be given you — write for bulletins.



Curtis Hydraulic Lifts



Curtis Car Washers

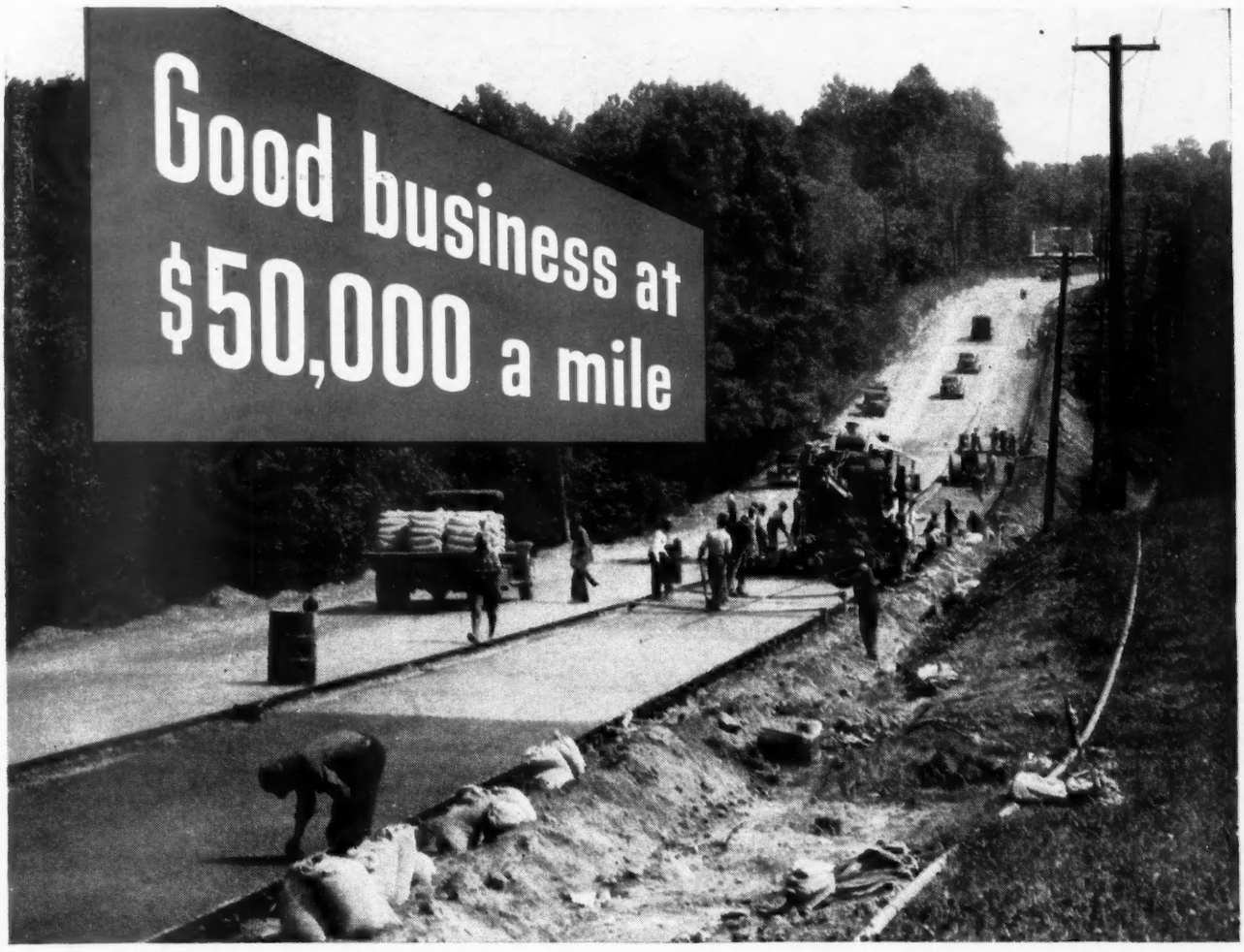
CURTIS PNEUMATIC MACHINERY DIVISION
of Curtis Manufacturing Company
1970 Kienlen Avenue St. Louis 20, Missouri

C 482

CURTIS PNEUMATIC MACHINERY DIVISION *of Curtis Manufacturing Company*
1970 Kienlen Avenue, St. Louis 20, Missouri

Please send me your Literature Kit C-6, which includes bulletins on Curtis Air Compressors, Curtis Auto Lifts and Curtis Car Washers.

Name.....
Firm.....
Street.....
City..... Zone..... State.....



● Fifty-thousand dollars for 5,280 feet of concrete may sound high priced, but *we can afford it.*

Highway improvements pay for themselves by lowering transportation costs—by making higher speeds and heavier pay-loads possible.

In a few words, *good highways are good business.*

As trucks and buses go faster and carry heavier loads —as the science of *going* progresses—there are new problems to be solved in the twin science of *stopping.*

American Brakeblok has *specialized* in sure, safe stops for many years. As super-vehicles are built to roll on super-highways, American Brakeblok Brake Lining is trusted by automobile manufacturers, fleet operators and drivers to stop the load. For this reason, a majority of trucks and buses use American Brakeblok lining as original equipment.

Maintenance men and fleet operators specify American Brakeblok Heavy Duty Brake Lining because it is available in three types to meet the specific requirements of all operating conditions and the various kinds of brake systems. The use of brake lining with correct frictional qualities for the job *ups* safety and *cuts* operating costs.

If you operate a truck or bus, in all probability, American Brakeblok can make a contribution to safety and operating efficiency through better brake lining.

Stopper says: "We make brake lining for all types of vehicles and brake systems. But only one quality—the best!"

NAPA Assurance of Quality

Thirty-eight strategically located NAPA warehouses carry master stocks of American Brakeblok products.

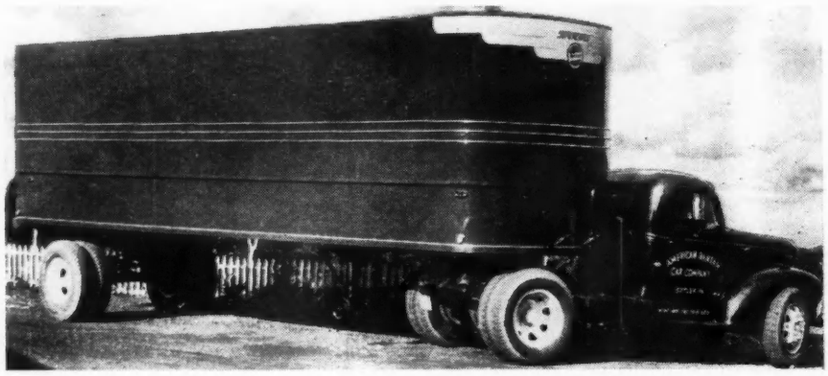
American Brakeblok

BRAKE LINING

AMERICAN Brake Shoe COMPANY

AMERICAN BRAKEBLOK DIVISION
DETROIT 9, MICHIGAN

Supercargo Trailers in Production



PRODUCTION models of its new line of Supercargo truck trailers are now rolling off the assembly lines, according to announcement by American Bantam Car Co., Butler, Pa. Although load ratings have not yet been made available, the Supercargo trailers are described as "heavy tonnage" vehicles and are offered in four models: a closed van, an open-top van, a flat bed and a chassis.

An important feature is the Bantam torque arm drive and spring suspension, which, according to company officials, permits brake torque to be absorbed through spring-type torque arms. This method of absorbing brake torque and road shock is further aided by a floating spring trunnion. Increased tire mileage, better riding qualities and lower maintenance coasts are claimed as a result of this suspension system.

American Bantam has also revealed that its new all-purpose, half-ton utility trailer has been in production for several weeks with output exceeding 150 units per day with potential production of 350 to 400 units a day now in sight.

"Every Mechanic Needs These Two Sets!" Says: Central Mike
CENTRAL
Certified Accuracy
MICROMETERS
SET NO. 808
Inside Micrometers
Range 1½ to 8 inches.
$12.00
Complete with Extension Handle and DeLuxe Plush-Lined Case
SET NO. 745 RL
Outside Micrometers
Range 0 to 4 inches.
$46.50
Complete with Ratchet Stops, Lock Nuts, Standard Test Gauges and Deluxe Hinged Plush-Lined Case
THE CENTRAL Certified Accuracy MICROMETER
GUARANTEE
The Central Tool Co.
WRITE TODAY FOR CATALOG NO. 17
The entire line of individual micrometers and complete sets illustrated and fully described.
THE CENTRAL TOOL CO., AUBURN, RHODE ISLAND
CENTRAL
FOR MORE THAN A QUARTER CENTURY SPECIALISTS IN FINE MICROMETERS
CERTIFIED ACCURACY

BOWERS BUYS WESTERN

The purchase of the Western Battery and Supply Co. of Denver, Colo., by the Bowers Battery and Spark Plug Co. has been disclosed by C. P. Bowers, president of the Reading battery concern. This brings the number of Bowers plants now in operation to eight and makes possible a nation-wide distribution of the company's products.

The Hon. James G. Stewart, Mayor of Cincinnati, presents the Trailmobile Safety Trophy to Mart Buhner, president of Silver Fleet Motor Express Co., Inc., of Louisville, Ky., winners of the Seventh Annual Trailmobile Safety Contest. The presentation was made during the recent A.T.A. Convention in Cincinnati

LAUGH IT OFF

(CONTINUED FROM PAGE 102)

The pert young chick walked tantalizingly down the street with a toy Pomeranian on a leash. A huge trailer-truck was pulled up to the curb and a pair of burly mechanics were busily engaged trying to get the rig started. When the sweet tomato and the tiny dog came alongside one of the mechanics advanced toward them politely lifting his hat. "Lady, could we borrow your dog for a minute?"

The lady was startled. "Why, what are you going to do with the dog?"

"Hitch 'im to the truck to get it started," said the mechanic.

The lady lost her breath. "How idiotic! A little dog like that wouldn't pull that big truck."

"Oh, that's all right, miss," said the maintenance man with complete assurance. "We got whips."

C C J

Dave the Dispatcher and Al the Yardman were discussing the merits of their respective wives.

Dave: "My wife is an angel in three ways."

Al: "How remarkable! How is that?"

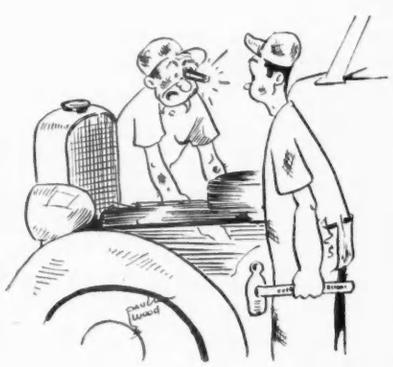
Dave: "Well, first, she is always up in the air; second, she is always harping; third, she never has an earthly thing to wear."

C C J

Dan, the Shop Foreman, was fortunate in procuring a bottle of liquid cheer with which he intended to see the New Year in. Upon taking it out of his locker, preparatory to leaving at the end of the day, he accidently dropped and broke it on the shower room floor, and it ate a big hole in the concrete.

"It just goes to show you." said Dan, "what rotten concrete the contractors are using on some of their jobs."

(TURN TO NEXT PAGE, PLEASE)



"Don't worry. She'll run on time from now on."

Galion GH-56 hydraulic hoist mounted with sturdy model 12 contractors body. Capacities 2 to 4 cubic yards.

GALION

HYDRAULIC DUMP BODIES FOR EVERY MATERIAL HANDLING JOB . . . . .

You name the size—2 to 20 tons—and you'll find there is a proven Galion Hydraulic Dump Body for the job on your truck. Each designed and built to provide the power and service which for years has made Galions the choice of contractors from coast to coast. You'll know it's a Galion if it has the patented equalizing double lift arm hoist

THE GALION ALLSTEEL BODY COMPANY
Galion, Ohio, U. S. A.

Extra heavy duty wrap around Boulder Dam type of body with folding endgate. Capacities to 20 cubic yards.

LAUGH IT OFF

(CONTINUED FROM PAGE 201)

Judge: "You are charged with running your truck 30 miles an hour through a 20-mile zone, smashing a parked car and plate glass window, and injuring three people. What have you to say?"

City Delivery Driver: "Great Scott, Judge, don't the four dollars I paid for a special driver's license and my chauffeur's union button entitle me to any privileges?"

Dan, the city deliveryman, pulled to a stop behind a heavy traffic snarl. Leaving his truck, he made his way to the center of the tie-up and discovered that a lady driver had stalled her car diagonally across both lanes while attempting to park. And there she sat, frantically and futilely grinding the starter of an engine which refused to fire because, in her excitement, she had turned off the ignition key. Tipping his cap politely, he approached her car to offer advice but was promptly "told off." In an impatient tone he quickly replied, "Calm down, lady. Turn your switch key on, and for Pete's sake use your noodle. Use your noodle!"

With a searching look at the dashboard, the frantic female answered, "Where's the noodle?" Where's the noodle? I've already pushed and pulled every damned gadget in sight." (They'll do it every time!)

C C J

The head of the house, seldom at home and usually in the dog house, was reading a newspaper article very carefully. When he had come to the end, he remarked to his wife: "Do you know, dear, I think there's something in what this article says — that the cleverness of the father often proves a stumbling-block to the son."

His wife heaved a sigh of relief.

"Well, thank goodness," she said, "our boy won't have anything to fall over."

C C J

An editor had cause to admonish his son because of the lad's reluctance to attend school.

"You must go every day and learn to be a good scholar," said the fond father. "Otherwise you can never be an editor, you know. What would you do, for instance, if your magazine came out full of mistakes?"

"Father," was the reply, "I'd blame the printer."

And the father wept with joy, because he knew he had a successor for the editorial chair.

END

(Please resume your reading on P. 104)

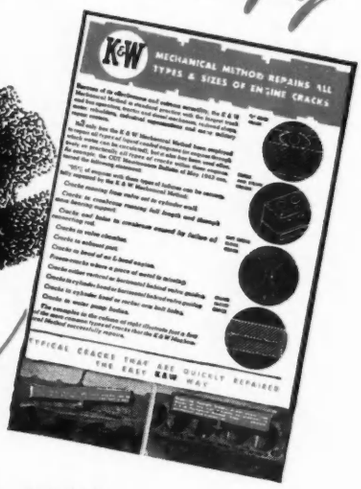
"She still gallops a little. Must be them plugs."

JOSEPH HEIL HEADS COMPANY

Joseph F. Heil was elected president of the Heil Co., Milwaukee, Wis., at the annual meeting of the Board of Directors. Julius P. Heil, his father and former governor of the State of Wisconsin, will continue to take an active interest in the company as director and treasurer.

Send for Your FREE Copy

K&W NEW COMPLETE LINE CATALOG



LEARN THE MECHANICAL METHOD PRINCIPLES THAT SAVE IMPORTANT TIME AND MONEY ON CRACKED ENGINE REPAIRS!

If you want to be up to date on engine repairs, you'll want your copy of Kerkling & Company's new K & W catalog — and you'll want it fast!

There's a big special section with illustrations and diagrams devoted exclusively to the "how" and "why" of the patented K & W Mechanical Method — the efficient, low cost way for repairing cracked engine heads and blocks.

Used extensively by leading engine rebuilders, fleet operators, railroads and military repair centers, the K & W Mechanical Method offers an amazing opportunity for slashing costs on cracked engine repairs.

Don't wait — get your K & W catalog now — it's free!

Nationally Advertised

MAIL THIS COUPON FOR YOUR FREE CATALOG TODAY!

Kerkling & Co., Bloomington, Indiana
Please send me the free K & W catalog:

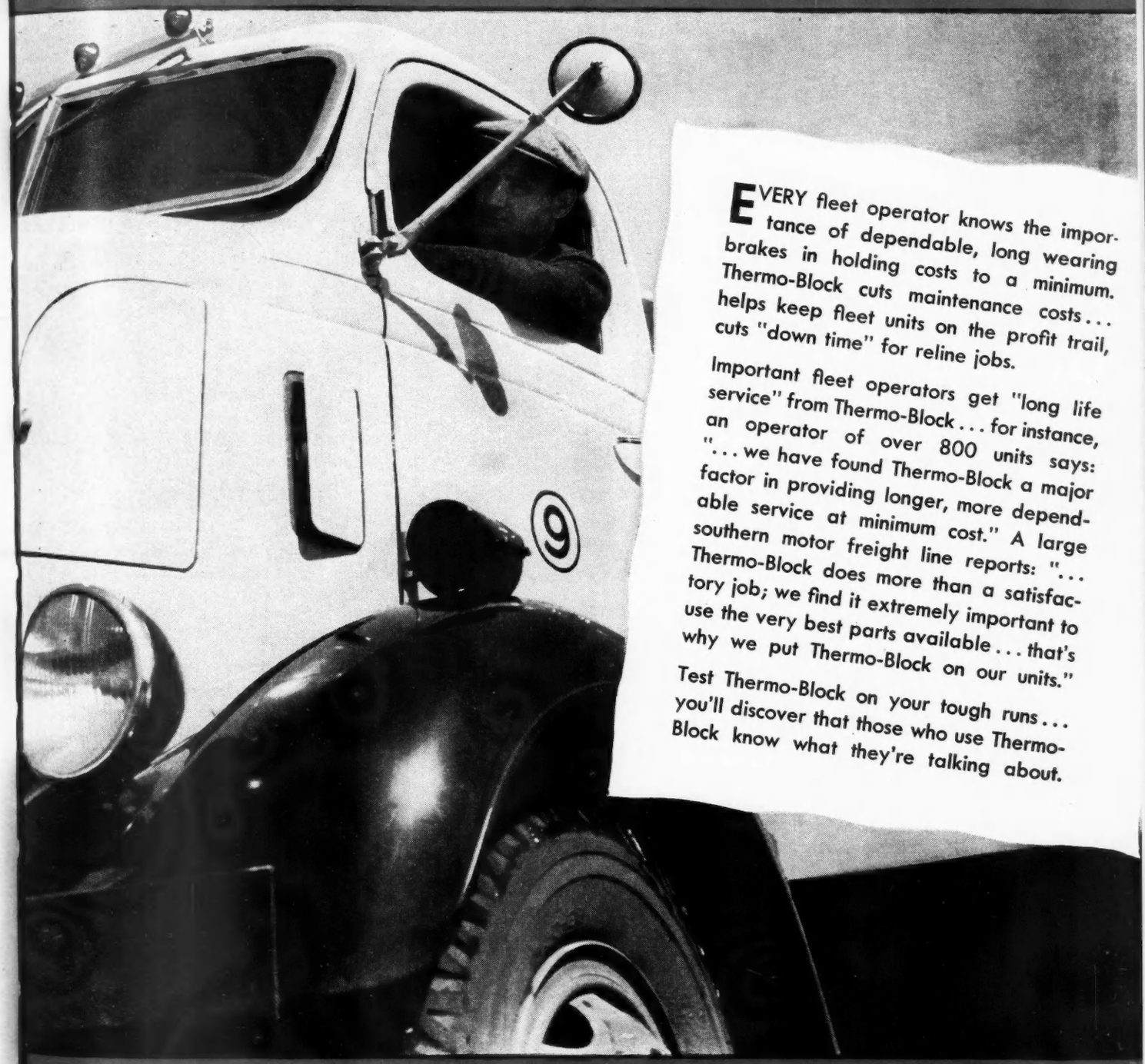
Name_____

Address_____

City_____ State_____

F

Thermoid the Longer-Life Line



EVERY fleet operator knows the importance of dependable, long wearing brakes in holding costs to a minimum. Thermo-Block cuts maintenance costs . . . helps keep fleet units on the profit trail, cuts "down time" for reline jobs.

Important fleet operators get "long life service" from Thermo-Block . . . for instance, an operator of over 800 units says: ". . . we have found Thermo-Block a major factor in providing longer, more dependable service at minimum cost." A large southern motor freight line reports: ". . . Thermo-Block does more than a satisfactory job; we find it extremely important to use the very best parts available . . . that's why we put Thermo-Block on our units."

Test Thermo-Block on your tough runs . . . you'll discover that those who use Thermo-Block know what they're talking about.

Thermoid

THE Longer-Life LINE FOR HEAVY-DUTY JOBS

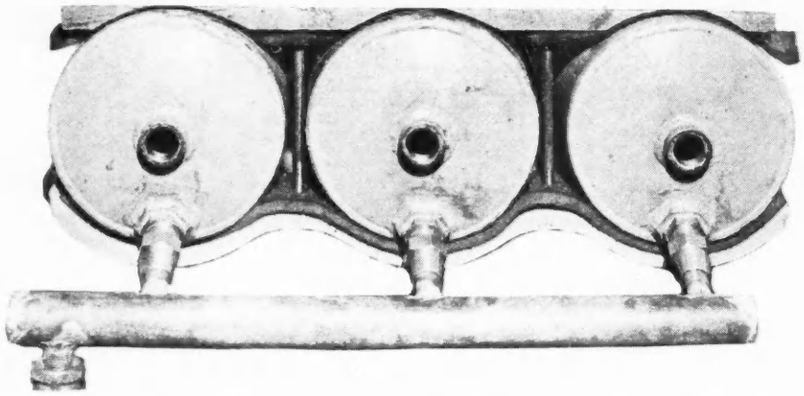
Thermo-Blocks • Clutch Facings • Fan Belts • Radiator Hose

THERMOID COMPANY, TRENTON 6, NEW JERSEY

HOME-MADE MANIFOLD SPEEDS TANK DRAINING

WATCHING an air tank being drained is something like observing the 5 p.m. rush in the subway. The more powerful and aggressive compressed air cuts a path through the collected liquid, and the latter does the best it can to slip out piecemeal with the air when it gets a chance.

During the cold winter months, it may take an hour or more for all of the liquid in the tank to get out. Now, if we could arrange it so that the air could not possibly get out of the tank before all the liquid is eliminated, chances are the entire operation would be over in a hurry. How can we accomplish this?



End view of multi-tank unit showing how each tank drains into manifold

E. N. Hatch, who operates a large number of vehicles for the N. Y. Board of Transportation, put his ingenuity to work and came up with a solution that has paid off.

First, he relocated the drain from the center of the bottom to the end of the tank; second, he tilted the tank toward this new drain; and, third, he provided a manifold to collect the drainings from multi-unit tanks—the manifold, in turn, being tilted toward a single, common drain.

As moisture, oil, etc., collects in the tanks, it immediately seeks the lowest level, which is in the manifold nearest the drain cock. Since the capacity of the manifold plus the leads from the tanks is from two to three pints and since only about one pint of fluid is collected during an average winter day, any liquid present is well down toward the drain cock. Then, when the cock is opened, the normal air pressure of 100 p.s.i., or so, quickly expels all the fluid in a matter of minutes.

This inexpensive improvement has saved time and money. Whereas, it formerly took 10 men each working day to keep the tanks of 400 vehicles drained (allowing only 15 min. per vehicle, which was an incomplete draining in many cases), the same number of vehicles can now be drained without *any* extra help by the drivers during their 5-min. stay at the "gassing up" pump.

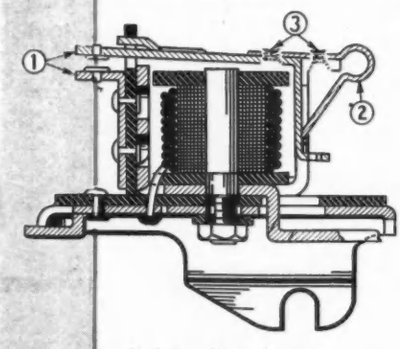
GENUINE P&D IGNITION PARTS

it's not the size...
but the PURITY that COUNTS!

It's not the flashy-looking products either, but the parts that have quality built into them, that count in the long run. P&D manufactures only ONE *complete quality line* of starting, lighting, ignition replacement parts, and coils.

When you handle the P&D quality line, you minimize inventory problems. P&D products do a better job in keeping your customers satisfied.

When better ignition replacement parts and coils are made — P&D will manufacture them.



U. S. Pat. No. 2061920

TYPICAL OF P&D PRODUCTS

The patent features and methods of construction used in our generator cut-outs, light and horn relays have been engineered to eliminate breakdowns or erratic action. P&D relays are accurately set to operate consistently under all driving or climatic conditions.

1. Large silver contacts assure long life and no pitting.
2. One piece phosphor bronze spring assures uniform tension under all temperature conditions.
3. Extruded rivets instead of loose rivets assure a perfect electrical connection. Unaffected by vibration, also eliminates high resistance.

P&D MANUFACTURING COMPANY, INC.
LONG ISLAND CITY, NEW YORK
STARTING • LIGHTING • IGNITION • REPLACEMENT PARTS
P & D MANUFACTURES ONLY ONE COMPLETE QUALITY LINE. ONLY THE FINEST MATERIALS AND WORKMANSHIP OBTAINABLE ARE EMPLOYED

more WHOA
—because it's POWER-SAPPED!

ORDINARY BATTERY—brand new, but like all idle batteries, it's gone power-shy just sitting on the shelf —may be stale and half dead when you buy it—may let you down soon after installation in your truck!

more GO
—because it's POWER-FULL!

GOODYEAR YKL BATTERY—always full of pep and punch when you get it, because your Goodyear dealer's exclusive "PowR SavR" keeps it on constant power charge until installed. That's why it has more "go" to start with—stays road-ready longer in your truck!

PLUS { **CUSHIONED POWER CONSTRUCTION**

YOU'RE sure of right-on-the-button starts far longer with the heavy-duty YKL because Goodyear's *cushioned power construction* makes it shock- and shake-proof. Felted Fiberglas mats placed between the plates cushion them against jolting road jars, provide sure plate protection—prime requisite for longer battery life. So keep these facts up front for your next battery buy. Get a power-*full* Goodyear YKL and be sure of the best buy!

YKL—T.M. The Goodyear Tire & Rubber Company

PowR SavR

—Goodyear's exclusive charger rack, keeps batteries automatically at power-peak with a continuous trickle-charge until installed. That's why they have more "go" to start with—stay road-ready longer in your truck!

YKL BATTERIES
—for buses, trucks, tractors

GOODYEAR

THE GREATEST NAME IN RUBBER

WASHINGTON RUNAROUND

(CONTINUED FROM PAGE 104)

rise is expected in the price of truck parts. The increase in the price of auto parts is estimated to be no greater than the increase which would have been permitted under OPA's reconversion formula. However, this decontrol of automotive parts has made it difficult for other industries to obtain similar parts.

OPA's control on truck prices is expected to hold down increases in the price of original equipment parts.

A supplemental OPA action, designed to spur the production of replacement parts, permits producers of repair and replacement parts to apply for upward adjustments in ceilings if they are in a position of financial hardship.

Truck Pricing Order by Apr. 15

The long-awaited truck reconversion pricing order should be issued before April 15. The order will establish a formula which manufacturers will use to compute their individual ceilings, subject to OPA approval. The OPA order authorizing the sale of new automobiles on an adjustable pricing basis, pending upward revision of ceilings necessitated by higher wage and steel costs, is a clear indication that the truck order will not cut back prices 25 to 27 per cent as was originally contemplated. Actually, the cut will be greatest in lower-priced models, while higher-priced trucks are expected to remain at about present levels.

Truck Rationing Feared If . . .

Truck manufacturers are fearful that expansion of the CPA critical materials list will eventually mean a broad system of truck rationing, similar to wartime allocations. As pointed out in this column several months ago, producers of items on this critical list, which is composed primarily of materials essential to the emergency housing program, can under Direction 6 to PR 28 receive a "CC" rating for the purchase of trucks to be used in the production of the critical items in question. Ratings may not be used by distributors of such products.

CPA has told the truck industry advisory committee that it will resist further expansion of the critical list, unless overruled by higher authority, and that no such expansion will be made without again meeting with the industry.

Up to the present time only .4 per cent of total truck output has been delivered under "CC" ratings.

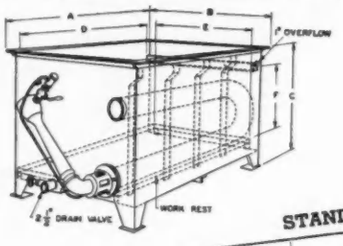
In a clarification of the order authorizing ratings for trucks, CPA has ruled that firms holding such ratings must take any truck available, provided it will do the job, and cannot insist on a particular model.

OPA Studies Trailer Prices

Trailer production figures should soon be available. The manufacturers backed by their association are getting behind the Census program and are now filing production reports. This change in attitude was brought about by the trailer industry's application for an OPA review of their price situation. It will be

(TURN TO PAGE 208, PLEASE)

DETREX ALL-PURPOSE TANKS For Heavy-Duty Cleaning

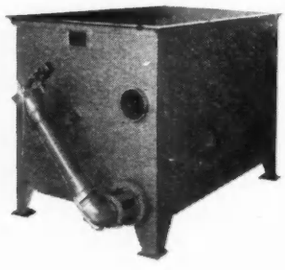


STANDARD DIMENSIONS

Size	Overall Dimensions Length A	Width B	Height C	Inside Dimensions Length D	Width E	Depth F	Gas Consumption Cu. Ft. Per Hr. 1000 BTU	500 BTU	Steam Consumption Lbs. Hr.	Service Connections Gas	Steam	Drain
T1S	4'-0"	2'-10"	3'-0"	40"	24"	24"			110		1¼"	2½"
T1G	5'-0"	2'-10"	3'-0"	40"	24"	24"	100	200		¾"		2½"
T2S	6'-0"	3'-8"	3'-9"	58"	30"	30"			275		1¼"	2½"
T2G	7'-0"	3'-8"	3'-9"	58"	30"	30"	250	500		1"		2½"

All-Purpose Tanks, designed primarily for garages and maintenance repair shops, have been adapted to practically all industrial cleaning requirements. Heavy motor blocks, automotive parts or small production line parts are cleaning jobs which are handled easily and efficiently by this unit.

Positive cleaning action is provided by agitation shields in steam models and blast-type immersion combustion-tube burners in gas-heated All-Purpose Tanks.



Write today for information on Detrex Triad alkali compounds and emulsions.

DETREX Corporation
DETROIT 27 • MICHIGAN
E-114

FOR MORE MILEAGE IN CANVAS PROTECTION . . . MT. VERNON EXTRA

More protection per mile when you specify this top-cotton canvas with the uniform weave, and smooth, even selvedges that assure snug, flap-free fit. For better protection against weather, road-grime and rough handling — MT. VERNON Extra duck.

MT. VERNON-WOODBERRY MILLS

TURNER HALSEY
COMPANY
Selling Agents
40 WORTH ST. • NEW YORK

Branch Offices: CHICAGO • NEW ORLEANS • ATLANTA • BALTIMORE • BOSTON • LOS ANGELES • SAN FRANCISCO

CLARK *Electric*

battery powered

FORK TRUCKS

2½ to 3½ TON CAPACITY

Tiering to desired height

Priced on Basis of Clark Volume Production

Lifts

Carries

Tiers

Write for VEST POCKET CATALOG

CLARK TRUCTRACTOR

Division of CLARK EQUIPMENT COMPANY

BATTLE CREEK, MICHIGAN

OTHER PLANTS — BUCHANAN, JACKSON, BERRIEN SPRINGS, MICHIGAN

Products of CLARK • TRANSMISSIONS • ELECTRIC STEEL CASTINGS
AXLES FOR TRUCKS AND BUSES • AXLE HOUSINGS • BLIND RIVETS
INDUSTRIAL TRUCKS AND TRACTORS • HIGH-SPEED DRILLS AND REAMERS
METAL SPOKE WHEELS • GEARS AND FORGINGS • RAILWAY TRUCKS

WASHINGTON RUNAROUND

(CONTINUED FROM PAGE 206)

necessary for OPA to have accurate production information before it can decide whether the truck-trailer industry is entitled to a price increase.

OPA has already begun the review and quick action is hoped for by the industry. The fact that no wage pattern has been set in the industry since VJ-Day makes OPA's task a little more complicated. However, the industry is basing its case for higher prices on cost increase since March, 1942. There has been no industry-wide price increase since that time. When OPA's decision is finally made it will very likely include a recommendation to suspend price ceilings on trailer components.

The trailer producers are faced with a critical shortage of lumber, particularly softwood plywood, due to the heavy lumber requirements of the emergency housing program. They have been told that they will have to find substitutes. This situation will also adversely affect independent body producers.

Safety Rules Rewrite

Although it may be another year before any revisions in the ICC Motor Carrier Safety Regulations become effective, it is becoming increasingly clear that the Bureau of Safety plans extensive changes which might very likely amount to a complete rewriting.

The changes will be based on the experience the ICC has had in administering the present set of rules.

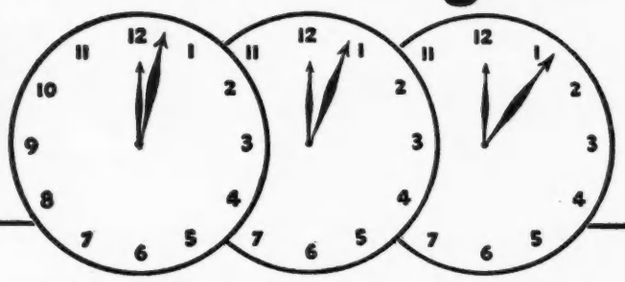
Prospective changes are still in the discussion stage, but some of the ideas set forth by the ICC give an indication of what might eventually be promulgated.

There is little doubt that the ICC will endeavor to write into the regulations a provision requiring a periodic physical examination for all drivers.

A limitation on duty hours, which would place duty hours on a daily basis and eliminate the sliding week, is also being talked about. This plan would limit a driver's work week to 72 hours with a full 24 hours off every week. It might also eliminate time spent in sleeper berths as part of off-duty periods.

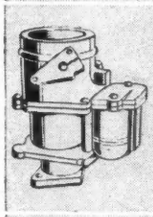
(TURN TO PAGE 210, PLEASE)

How to Cut Metal Cleaning Time to MINUTES



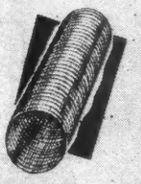
NEW, FAST-ACTION DETERGENT CLEANS FERROUS AND NON-FERROUS METALS...Easy to Handle

TYPICAL USES FOR Solvent "26"

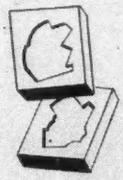


CARBURETORS—Solvent "26" removes gum, gasolene sediment and other accumulations of dirt.

SPARK PLUGS—Solvent "26" safely cleans porcelain; helps loosen carbon deposits.

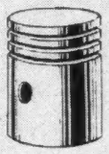


METAL PLATES AND SCREENS—Solvent "26" restores clear, clean finish to any metal surface.



DIES AND STAMPING—Solvent "26" removes drawing compounds from die-formed or stamped metal.

LABORATORY EQUIPMENT—Solvent "26" frees glass and metal tubing and their supports of gums, varnishes and other incrustations or deposits.



PISTONS—Removes lacquers, gums, resins, etc. from gas, gasolene and diesel engine pistons and rings. Also effective for cleaning all parts of dismantled motors, engines and machinery.

REMOVES:

Oil • Grease • Gums • Varnishes • Lacquers • Paints
Carbonaceous Deposits • Asphaltic Products

FROM:

Steel • Cast Iron • Aluminum • Porcelain • China
Chrome and Nickel Plate • Stone • Precious Metals
Brass • Washable Fabrics

Used throughout the war in critical industry as a superior cleaning agent, newly-developed SOLVENT "26" is now available for all industrial needs.

Offering many advantages in time, labor and cost over other present cleaning methods . . . Solvent "26" is so effective a detergent it can be used at *ordinary* room temperatures.

The fast action of Solvent "26" reduces cleaning time from hours to minutes on dismantled engine parts and all kinds of machinery. Simply dip, rub, brush or spray it on. Then flush clean with hot water.

Mail the coupon today for literature and information leading to a demonstration of this unique product in your own plant.

CITIES SERVICE OIL COMPANY
ARKANSAS FUEL OIL COMPANY

CITIES SERVICE OILS
ONCE-ALWAYS

Cities Service Oil Company
Room 710
70 Pine Street
New York 5, N. Y.

Gentlemen: I am interested in a demonstration of Solvent "26"—at no cost or obligation.

Name.....
Title.....
Company.....
Address.....
City..... State.....

WASHINGTON RUNAROUND

(CONTINUED FROM PAGE 208)

Overseas Surplus Switch

Signals have been changed on the return of surplus Army vehicles from overseas. Originally, no such return was in prospect, but for the past several months trucks have been shipped from Europe and the Pacific Theater.

General Douglas MacArthur has been returning all new and serviceable civilian surpluses. A committee headed by John D. Small, CPA Administrator, has prepared a list of critical commodities which should be returned. This list includes among other things trucks of all sizes and new automotive maintenance equipment. According to the committee, the most immediate need is for jeeps, and 2½ ton 6x4's and 6x6's. An official order calling for the return of these critical items only is expected momentarily.

Most of the trucks to be returned in the future will come from the Pacific. In Europe there are about 80,000 trucks out of repair, due to the lack of trained mechanics, supervisory personnel, and parts, and partially due to the irreparable condition of the trucks themselves. Most of them will never be usable as trucks and will not be returned to this country.

Some 3000 crated trucks have been returned from the India-Burma theater, and General MacArthur's command may return a few additional new, crated trucks. But for the most part trucks coming from the Pacific have been classified by Ordnance officers as "junk."

In January 5343 carloads of general purpose vehicles were received in this country. In February this dropped to 3900 carloads, including 900 2½ ton 6x6's. Ordnance officers do not anticipate further large shipments. Trucks already received were in extremely bad shape, and some vehicles were not recognizable as such. All required extensive repairs before being put into service by the Army or declared surplus.

The newer and more serviceable vehicles overseas are being retained by field commanders or sold to UNRRA or the Foreign Liquidation Commission. For this reason, it is estimated that no trucks will have to be shipped overseas for the balance of the occupational period.

Congressional Capers

The resolution authorizing an investigation of the transportation system by the House Interstate and Foreign Commerce Committee has been passed by the House. The House Accounts Committee has granted Chairman Leas' Committee $35,000 for its first year's work. Public hearings are not expected until legislation, based on an analysis of the replies to the Committee's questionnaire, is drafted. . . . Eventual passage of the Bulwinkle bill by the Senate is generally conceded, but this may not happen until the Supreme Court disposes of the case in which the State of Georgia charges the railroads with discrimination in fixing of rates. . . . It is not likely that any strike control legislation will clear the Senate during the present session, despite the fact that the Senate Labor

(TURN TO PAGE 212, PLEASE)

Orrville Sleeper Cabs

EVERYWHERE!

THESE FACTS HAVE PROVEN ORRVILLE DELUXE SLEEPER CABS THE INDUSTRIES' FAVORITE

1—Safety ***3—Durability***
2—Comfort ***4—Style***

Pleasure car comfort in a truck cab.

THE ORRVILLE BODY CO.
ORRVILLE, OHIO

Designers & Fabricators of Sleeper Cabs, Crew Cabs & Custom Bodies

43 *YEARS*

The history of Long radiator manufacture goes back to the very beginning of the automotive industry, and we have been at it ever since. The experience and knowledge gained in this lifetime of specialization are incorporated in every Long radiator produced today. Long Mfg. Division, Borg-Warner Corp., Detroit and Windsor, Ont.

LONG

CLUTCHES • RADIATORS • OIL COOLERS

WASHINGTON RUNAROUND

(CONTINUED FROM PAGE 210)

Committee has reported a bill, which would strengthen government mediation procedures, minus the penalty provisions of the House-approved Case bill. An amendment by Sen. George D. Aiken, Rep., Vt., which Sen. Robert A. Taft, Rep., Ohio, dubbed a "bob-tailed" version of the Hobbs anti-racketeering bill, was tied to the committee approved bill. This amendment provides for a fine of $2000 or one year in jail or both for anyone convicted of obstructing delivery or transportations of perishable farm products by a farmer or his employees. . . . The Senate is also expected to side-track the minimum wage bill, S. 1349, which would eliminate helpers, loaders and mechanics from the present overtime exemption of the Fair Labor Standards Act. The bill would also raise the national minimum wage from 40 cents to 65 cents per hour immediately, to 70 cents two years after enactment, and 75 cents four years after enactment. Southern Senators object to raising the minimum to these levels. The eventual new minimum wage will more likely be a flat 55 or 60 cents per hour. However, on the House side there is a strong move to force passage of minimum wage legislation before Congress adjourns.

Miscellaneous Musings

While the Second War Powers Act will probably be extended beyond June 30, the ODT has recommended the discontinuance of Title I, as far as land transport is concerned. This title authorized enforced pooling of equipment, services and facilities. . . . Higher tire prices are in the wind, due to higher wage costs in the tire industry. . . . At the end of March OPA was considering the suspension of price controls on most capital goods industries. Included would be machine tools, fractional and integral hp. motors, construction machinery, lead storage batteries, air compressors, vises, mechanical and hydraulic jacks, and industrial hand trucks. . . . OPA is gloomily expecting a flood of applications for rate increases as higher wages spread through the trucking industry. . . . A Department of Commerce study reveals that 71 per cent of the filling stations, 40 per cent of the motor-vehicle dealers, and 31 per cent of the tire, accessory and battery dealers in business in 1929 were still in business in 1939.

While the regulations that have been issued to further the emergency housing program have put a stop to practically all new construction, they do not prohibit work on highway projects or repair and maintenance work in transportation structures. Also permitted is the construction, repair, alteration or installation of carrier terminals, provided the total cost of such work is not more than $15,000. Applications covering these types of construction must be filed with one of the 71 CPA District Construction offices.

END

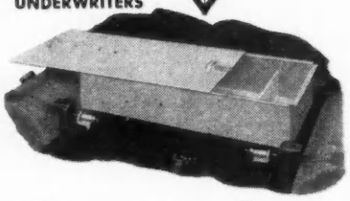
(Please resume your reading on P. 106)

GET PROTECTION *PLUS* *in*

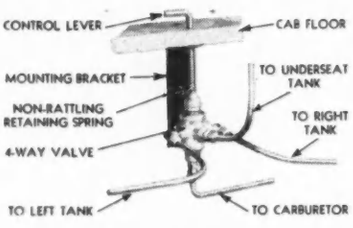
CHAMPION *Safety* TANKS

APPROVED BY UNDERWRITERS

Manufactured by Allied Equipment Co. Detroit, Mich.



Strong, spacious Champion Tool Box with reinforced lid which opens from either side. Carries all necessary tools. Installed without drilling frame.



Four-Way Valve selects any tank from which to draw gas. Indicating control handle extends through floor. Extra safe as no gas lines enter cab.

PATENTED BRACKETS enable any handyman to mount tank in a matter of minutes.

NO DRILLING. NO WELDING. Tank easily transferred if desired.

DISHED HEADS, swedged into shell and electrically welded, for double thickness and extra strength.

FUSIBLE PLUG relieves pressure and prevents explosion in case of fire.

SAFETY BALL CHECK prevents leakage in event of capsizing.

LARGE FILL TUBE takes gas in volume, rapidly and without "kick-back".

MEASURING STICK in filler tube permits quick checking and easy inspection to prevent "dumping".

Write for literature describing these and other features.

Distributed Nationally by

TRUCKSTELL

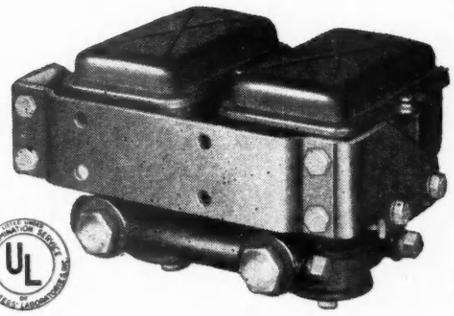
1672 UNION COMMERCE BLDG.

CLEVELAND, OHIO

DEVELOPERS & DISTRIBUTORS OF TRUCK EQUIPMENT

ENGINEERED TRUCK CONVERSIONS FOR EVERY ROAD & LOAD

YOUR TRUCKS WILL TAKE HILLS LIKE THIS!



30% More Gas on One Pump Alone in Dual Installation!

Where gas requirements are high, install Stewart-Warner Dual Electric Fuel Pumps. This combination more than doubles the life of each pump. Duals can be installed a variety of ways to operate independently so that one pump operating alone assures 30% more gas than normal single unit installation. The second becomes a safety pump in case of emergency.

. . . or so it will seem with

STEWART-WARNER

ELECTRIC FUEL PUMPS

- **No vapor-lock.**
- **No fuel pump failure.**
- **No engine gasping for gas.**
- **Pump operates only when needed.**
- **Delivers 15 gallons per hour on an average of one ampere of current.**

Constant pressure pushes gas to the carburetor. No vapor pocket can form. What's more, a Stewart-Warner Electric Fuel Pump is a "smooth operator"—lasts long—doesn't pulsate or "beat itself to death." The diaphragm of Du Pont Fairprene simply can't wear out. No rotating parts, no piston, no bearings to fail.

The contact points are sealed in a hydrogen tube and are operated and controlled magnetically. Bears the seal of Underwriters' Laboratories.

For more efficient, more profitable truck operation, install Stewart-Warner Electric Fuel Pumps as replacements or as auxiliary "safety" pumps for heavy-duty operation. Stewart-Warner Corporation, 1876 Diversey Parkway, Chicago 14, Illinois.

STEWART-WARNER

ELECTRIC FUEL PUMP

Another Product of STEWART WARNER

Standards for Highways of the Future

by HERBERT S. FAIRBANK*
Deputy Commissioner
Public Roads Administration
Federal Works Agency

Multiple, 12-ft. lanes, wider shoulders, increased sight distance, more underpasses, better signs and signals on the way

Herbert Fairbank

HIGHWAYS of the future will differ from highways familiar to the past mainly in a better adjustment of their design and capacity to the character, purposes and volume of their usage. This I believe to be the broadest possible characterization of the highways of the future.

It is applicable at the one extreme to the relatively small part of the total road and street mileage that serves, and will continue to serve, the principal arterial traffic streams between and within the cities. It is equally applicable at the other extreme to the much greater mileage the function of which will remain, as in the past, the gathering of the great arterial streams from, and their distribution to, the farms and the city homes and places of business and industry that are both the sources and the destinations of all highway movement.

The achievement of this change is the central purpose of the plan of integrated highway improvement envisaged in the Federal Aid Highway Act of 1944.

The report to Congress of the National Interregional Highway Committee, will be especially effective in determining the character of the principal arterial highways of the future. It proposes standards in great detail to which the design of such highways should conform. They are standards informed by a long view ahead, and are not yet generally accepted in all details for present application, but time will bring their more complete acceptance.

Safety Features Stressed

THESE standards of the future call for a judicious employment of the device of controlled access to protect

* Excerpted from paper presented at S.A.E. Annual Meeting.

(TURN TO PAGE 216, PLEASE)

SEE DAN, THAT CARBURETOR WAS EATEN UP BY A CAUSTIC CLEANING SOLUTION. NEXT TIME USE SOAX!
I CAN'T UNDERSTAND IT. I PUT THAT CARBURETOR IN HERE THREE DAYS AGO!!
DIRTY DAN
GERLACH GIL
ROGERS

A SOAX carburetor is a clean carburetor . . . SOAX is a cold immersion DIRECT ACTION cleanser that gets right down to the metal . . . removes carbon, grease and dirt . . . will not harm even soft metals . . . is easy on the hands . . . is NON-combustible. Try SOAX in your shop. . . . Write us today for complete technical data and prices, or ask your jobber.

E. A. GERLACH CO. 410 BEURY BLDG., PHILA. 40, PA.
MFRS. OF 70 STRIPPER . . . JELZINE . . . SPRUCE JELL . . . SOAX

UNSURPASSED

for quick, safe, smooth stops

Wagner CoMaX Brake Lining

is available in Sets, Rolls, Blocks, and Slabs

Regardless of what your brake lining requirements may be—whether drilled sets, rolls, blocks or slabs—you'll find your choice in the Wagner CoMaX line. And no matter which type you choose, each is alike in the following characteristics:

1. Uniform in frictional qualities throughout the entire service thickness.
2. Does not compress or swell. Brakes remain adjusted over long operating periods.
3. Easy on drums. Contains no abrasive material.
4. Wears slowly.
5. Doesn't deteriorate with age.
6. Is quiet—grips silently with no "squealing."
7. Permits smooth, controllable deceleration.
8. Available through a Wagner jobber near you. Ask him for Wagner CoMaX Catalog BU-128 or write to Wagner Electric Corporation, 6470 Plymouth Ave., St. Louis 14, Mo.

B46-3

LOCKHEED HYDRAULIC BRAKE PARTS AND FLUID...NoRol...CoMaX BRAKE LINING

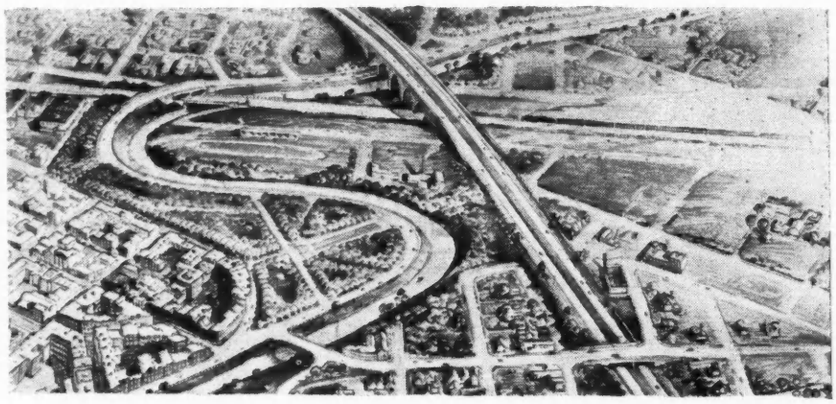
AIR BRAKES...TACHOGRAPHS...ELECTRIC MOTORS...TRANSFORMERS...INDUSTRIAL BRAKES

Wagner WE Electric

HIGHWAYS OF FUTURE

(CONTINUED FROM PAGE 214)

the arterial traffic from dangers of frequent and unheralded emergence of vehicles from abutting property. They call for wide rights of way, not less than 224 and up to 300 ft. wide. They require shoulders wide enough to accommodate standing vehicles clear of the traffic lanes, firm enough to withstand infrequent use in emergency by vehicles moving at high speed, and free of dangerous difference of level at the line of junction with the paved surface.



Artist's conception of a super, multi-lane highway through a modern city. Grade separations at all intersections permit a smooth flow of cross traffic

They prescribe flat slopes for the sides of embankments to lessen the danger of accidental departures from the roadway, and curvature, spiraled and super-elevated for safe negotiation at expected vehicular speeds. They specify the provision of sight distance everywhere sufficient to permit the safe stopping of vehicles moving at the design speed, and wherever financially feasible, on two-lane sections, sufficient to permit the long view ahead which is necessary to allow the faster vehicles to pass slower ones without danger of collision with vehicles moving in the opposite direction.

Lane width of 12 ft. is the uniform requirement of these standards, and two lanes are specified for roads carrying traffic less than 2000 vehicles per day, a volume that will not be exceeded in many years even on most of the more important rural highways. Roads serving between 2000 and 3000 vehicles a day would be constructed with two lanes where it is possible to provide safe passing sight distance, but with four lanes, two for each direction separated by a median strip, where safe passing sight distance is unobtainable. For traffic volumes between 3000 and 15,000 vehicles daily in rural areas and all lesser volumes in cities, divided four-lane highways would be provided; and volumes above 15,000 vehicles daily in rural areas and

(TURN TO PAGE 218, PLEASE)

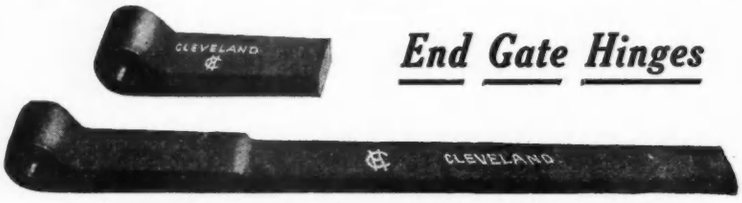
The Trade Mark of QUALITY

Equip Your Trucks With "Cleveland" IRONS

"Cleveland" Body Irons stand up under the wear and tear of constant road vibration and severe shock of overloading.

SEND FOR CATALOG 22B, ILLUSTRATING THE COMPLETE LINE

"CLEVELAND" HINGES are solid drop forgings—from open-hearth steel. For long, dependable and economical service.....Use "Cleveland"

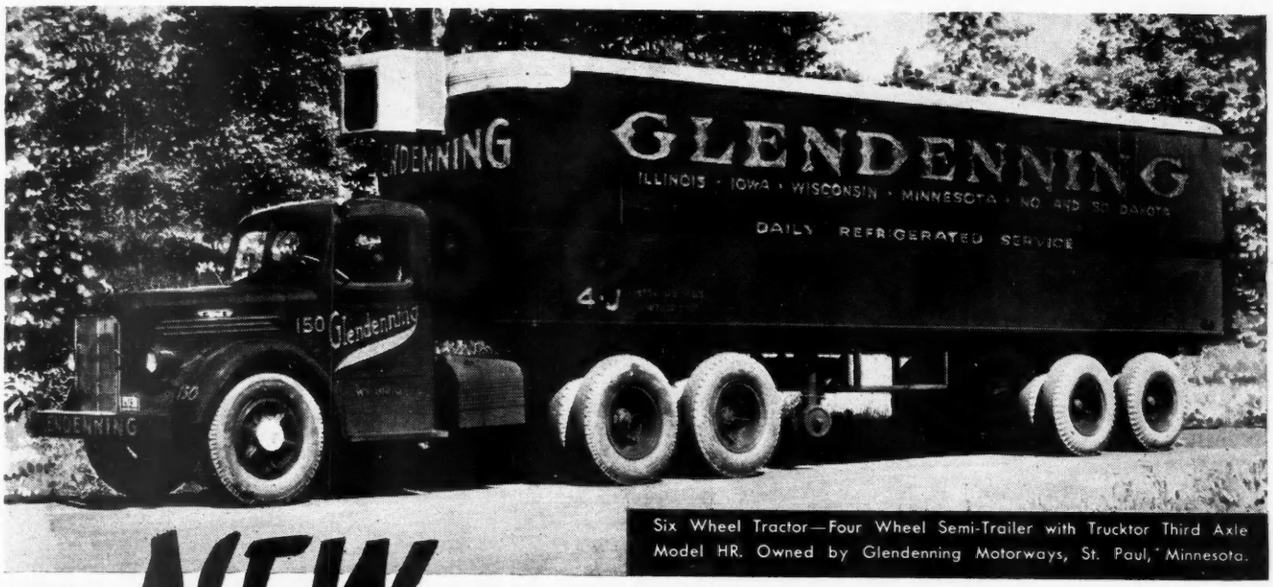


End Gate Hinges

Long Hinges vary from 12" to 30" in length.
In sizes from 1"x1¼" to 2¼"x½"
SHORT HINGES TO MATCH

"CLEVELAND" IRONS ARE FORGED FROM HIGHEST GRADE STEEL

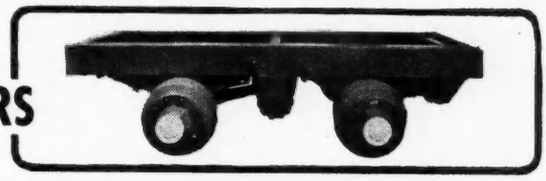
The Cleveland Hardware & Forging Co.
Established 1881
3264 East 79th St. Cleveland 4, Ohio



Six Wheel Tractor—Four Wheel Semi-Trailer with Trucktor Third Axle Model HR. Owned by Glendenning Motorways, St. Paul, Minnesota.

THE *NEW* TREND IN TRUCKING...

TRUCKTORED TRACTORS AND TRAILERS



Inquiries, and orders, especially from the South, indicate to us the sweeping interest in and growing popularity of the six wheel tractor with four wheel semi-trailer. Load limits are favorable to this highly productive unit, being as high as 90,000 lbs. gross in West Virginia, for instance.

In addition, this combination presents an opportunity to obtain all the advantages of the Trucktor axle assemblies.

1 RUBBER-MOUNTED, FULL FLOATING SPRINGS—remain square with frame, thus prevent frame distortion and are not subject to braking strains or axle torsion, keep spring clips tight.

2 SILENT SPRING SLIPPER ENDS have aluminum slide blocks that take sliding wear, maintain tension at all times, eliminating rattle and noise.

3 SPRING SLIDE BLOCK has broad contact area which reduces wear.

4 SPRINGS MOUNTED DIRECTLY UNDER FRAME eliminate outboard bending force on frame. Also permit wider frame, give greater freedom to body and tank design. Lower center of gravity allows narrower tread dimensions.

In your tractor, you incorporate the safety, economy, reliability and load-carrying capacity of the Trucktor Third Axle. Your trailers have the design freedom, greater stability, longer life and protection from strain that the Trucktor Trailer Axle affords. Check the ten points listed below. Write for bulletins describing Trucktor Trailer Axles and Trucktor Third Axles.

5 TROUGH TYPE FRAME permits low overall frame height, aids stability.

6 RUBBER MOUNTED Y SHAPED TORQUE ARM permits more accurate axle location, provides better brake control, retains axle alignment, lengthens tire life, reduces brake squealing, absorbs braking shock.

7 SIX POINT FRAME SUPPORT lengthens frame life and distributes load.

8 LOAD DIVIDING CHAIN AND SPROCKET in trough of frame between spring ends provides long life and great flexibility.

9 TUBULAR CROSS-SHAFT of load divider forms oil reservoir. One filling each month amply lubricates main wearing parts.

10 INTERNALLY LUBRICATED CHAINS need only occasional re-lubrication.

Additional information furnished upon request.

THE TRUCKTOR CORPORATION
156 WILSON AVENUE NEWARK 5, N. J.

Trucktor TRAILER AXLES

MADE BY THE MAKERS OF TRUCKTOR THIRD AXLES

HIGHWAYS OF FUTURE

(CONTINUED FROM PAGE 216)

above 20,000 in urban areas would be served by six lanes divided.

The standards recommended by the Interregional Highway Committee contemplate the separation of grades at all railroad crossings, and on the more heavily traveled routes a similar separation at intersections with other highways, with interchange ramps to provide for turning traffic. Where intersection grades are not separated, the proposal calls for a median strip 40 ft. wide, enough to provide safe central stopping space for most vehicles.

Will Accommodate Large Trucks

MINIMUM height clearance of 14 ft. and generous side clearance would be provided at all bridges and underpasses. On short bridges carrying the highway the width between curbs or rails would be sufficient to accommodate the full width of the approach pavement and its shoulders.

The standards contemplate a complete avoidance of the necessity for stop-and-go signals to halt traffic on the interregional highways, and a minimum of essential cautionary signing. They suggest in detail the form and placement of direction, route identification, and speed limit signs.

It will be apparent that these proposals look to the creation of highways superior in geometric design to the best existing highways. They look to a provision for utmost freedom of safe movement for traffic of the volumes for which they are designed which, at the suggestion of the Committee would be that estimated to develop in a 20-year future.

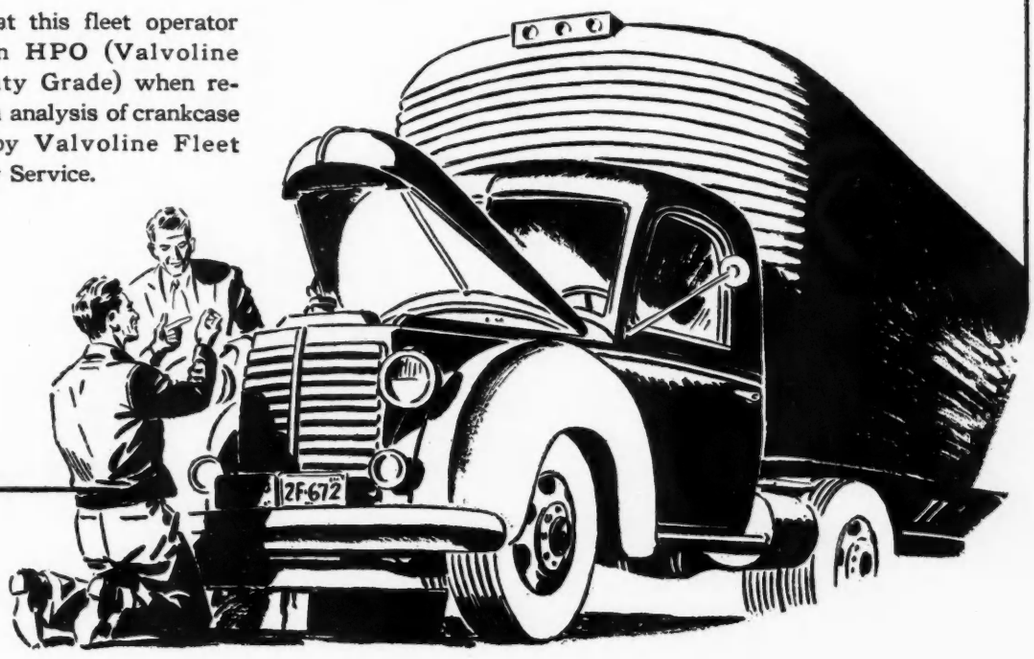
They would be highways fitted to accommodate vehicles as wide, as high, and as long as the most liberal of State laws now permit. Highway officials anticipate no future need for greater vehicular dimensions. The strength of bridges as proposed would be sufficient to carry all essential and economically defensible gross and group-axle loads. The one feature in which designers of vehicles are most likely to find disappointment is the proposal for strength of pavements and road foundations. In this respect the Committee concurred with the virtually unanimous opinion of highway authorities that there should be no effort now or in the future to provide pavement support for axle loads exceeding 18,000 lb.

The proposals of the Committee were addressed to a definition of the desirable character of roads forming sections of the interregional system it recommended for designation and construction. A practically identical system is now in process of official designation as the interstate highway system. The standards appropriate for this system of most important highways will be much too exacting for lesser roads, nor will they be needed for the safe and efficient functioning of such roads. The objective to be sought in modification of the maximum standards for applicability to roads of subordinate categories will be that of providing an economically supportable facility of movement for traffic of the kind and volume to be accommodated.

TEACHING OLD TRUCKS
NEW TRICKS
for COMPLETE ENGINE OVERHAUL
Above: HALL Model H Cylinder Hone.
for CYLINDER RECONDITIONING
Below: HALL Ring Ridge Reamer.
Left: HALL Piston Pin Hole Hones.
for VALVE AND VALVE SEAT GRINDING
Left: HALL Model E-J Valve Seat Grinder.
Teaching old trucks new tricks in performance and economy is a quick, simple procedure with HALL Valve and Cylinder Reconditioning Equipment. . . That's because it enables most any mechanic to duplicate factory precision and finish fast and at low cost. . . Ask your HALL Jobber or write the factory today for complete information on the HALL equipment you need.
THE HALL MFG. COMPANY
TOLEDO 7, OHIO
for INSERTING VALVE SEATS
Above: HALL Model 80 Wet Type Valve Refacer.
Left: HALL Model M Valve Seat Inserter.
HALL

Valvoline "changed at 4000 miles .... still looks good!"

That's what this fleet operator reported on HPO (Valvoline Heavy Duty Grade) when requesting an analysis of crankcase drainings by Valvoline Fleet Laboratory Service.



"Test shows drainage in good condition."

That's the conclusion of the "Fleet Lab" engineers after making the detailed analysis.

The engine from which this drainage sample was taken is a Cummins Diesel Engine HB-600 and gets heavy service, hauling perishable fruits and vegetables. The oil was Valvoline HPO-SAE 30.

The operator reports further: "In the last 7,000 miles it has used only 3 quarts and these were used in the first 500 miles. Since then, it has used no oil." Valvoline HPO is also giving exceptional service in the gasoline-powered units in this fleet.

VALVOLINE or HPO

AND

VALVOLINE FLEET LABORATORY SERVICE

an unbeatable combination

Records of successful performance, such as this, are common when Valvoline or HPO is used and the individual recommendations of the Valvoline Fleet Laboratory Service are followed. For information on how to get better fleet performance, wire, phone or write your nearest branch today.

FREEDOM-VALVOLINE OIL COMPANY

431 Main Street, Dept. 41-D, Cincinnati 2, Ohio

New York, Washington, Toronto, Pittsburgh, Atlanta, Detroit, Chicago, Los Angeles, Vancouver, B. C., Refineries at Butler and Freedom, Pennsylvania

Mack's Mono-Shift Permits Gear Pre-Selection

Offers advantages of Duplex transmission plus a refinement of ratios. One lever, with flipper at knob, controls 10 speeds

SINGLE-LEVER shifting of 10 transmission speeds in heavy-duty motor trucks with pre-selection of the compound ratios is offered by the Mono-Shift, introduced last year by Mack-International Motor Truck Corp., but not previously publicized. It represents a further development of the Mack Duplex transmission in which the compound or built-in auxiliary is power-shifted and synchronized, being controlled by a flipper on the single gear shift lever. This unit is available only on the EH, EQ, and LF group, in the model TRD 313 and TRD 323 transmissions.

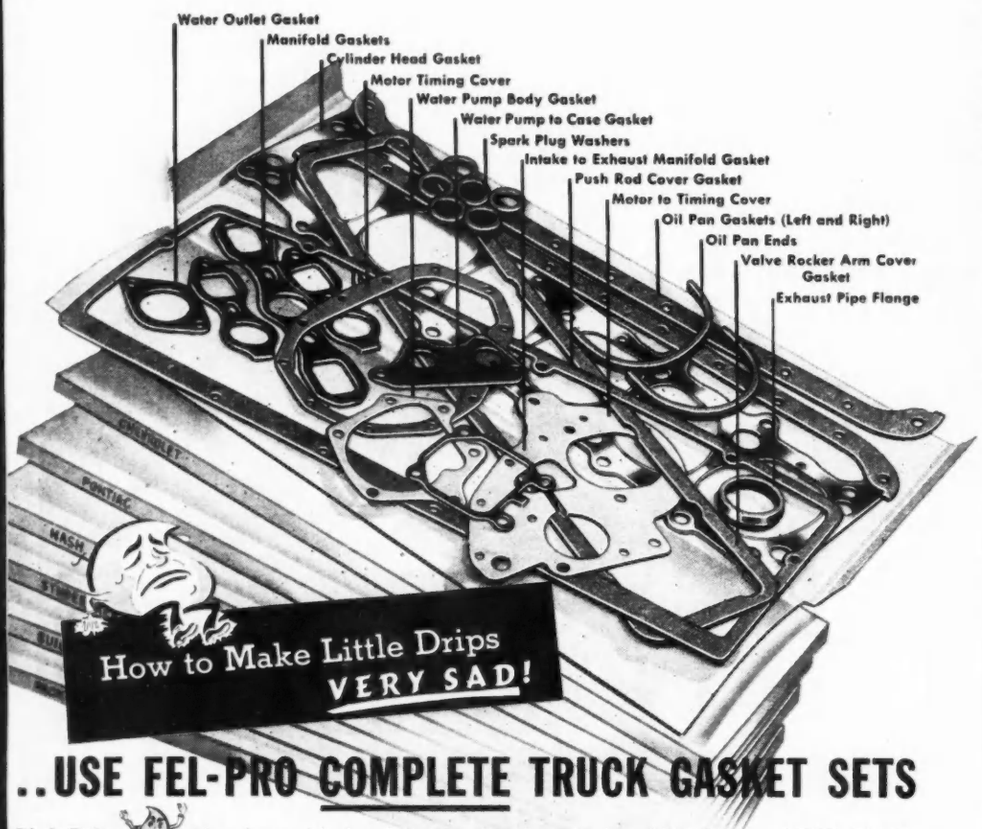
The Mono-Shift is said to retain the advantages of the Duplex transmission plus a refinement of ratios to produce an even progression of reductions for maximum performance and economy. Instead of two gear-shift levers, the Mono-Shift has a single one to control the five main speeds in the usual manner. Carried on this lever is a small flipper which can be moved to left or right with the finger to control the power shifting of the two-speed compound built into the transmission.

Not only does this make possible one-hand and simultaneous shifting of both the main ratios and the compound, but such shifts may be pre-selected. The flipper may be turned at any time—before, after or during a main ratio shift. If made during a shift, that is, when the clutch is released, the two shifts will occur at the same time. If between shifts, then the compound shift will not be made until the clutch is released, when it will take place automatically and almost instantaneously.

Advantage to Driver

THIS offers tremendous advantage to the driver. Ascending a short grade in tenth, for instance, he may anticipate the necessity of dropping down to ninth by pre-selecting ninth while still pulling in tenth. At the first sign of laboring and before road speed falls off, a kick on the clutch pedal completes the shift to ninth. By the same token, tenth may be pre-selected so that as soon as the crest is reached it may be returned to by another quick clutch release and engagement, without wasteful engine racing.

(TURN TO PAGE 222, PLEASE)


Water Outlet Gasket
Manifold Gaskets
Cylinder Head Gasket
Motor Timing Cover
Water Pump Body Gasket
Water Pump to Case Gasket
Spark Plug Washers
Intake to Exhaust Manifold Gasket
Push Rod Cover Gasket
Motor to Timing Cover
Oil Pan Gaskets (Left and Right)
Oil Pan Ends
Valve Rocker Arm Cover Gasket
Exhaust Pipe Flange
How to Make Little Drips VERY SAD!

..USE FEL-PRO COMPLETE TRUCK GASKET SETS

Little Drips often dance with glee when you install only one or two gaskets instead of re-gasketing the whole job. Little Drips clap hands when they see hand-made gaskets going in—especially if one has run out of the right material and uses a makeshift. Little Drips think that's fine because it's sure to give them a better chance to drip sooner or later!

But when you get a Fel-Pro Full Gasket Set and do the whole job the easy way, with the right gaskets for each place, Little Drips are SUNK. They're sealed in, everywhere, for a long, long time.

So if you want to make the Little Drips unhappy, tell your jobber you want these Fel-Pro Full Gasket Sets. You'll be in good company when you use Fel-Pro, for in war and peace, for many years, millions of Fel-Pro gaskets have been used by America's best mechanics, and installed as original equipment on the finest of automotive equipment.

FEL-PROtect

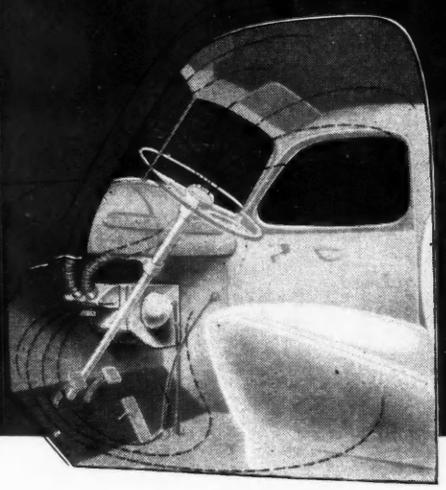
Above: FS 6824S Fel-Pro Complete Gasket Set for Chev. 6, '40-'42. Other car, truck and tractor sets are in jobber stock now.

FELT PRODUCTS MFG. CO. 1520 CARROLL AVE., CHICAGO 7, ILL.

1715

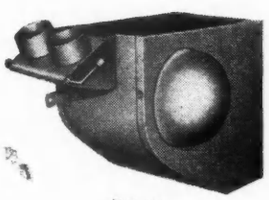
with FEL-PRO FULL GASKET SETS, PACKING, GREASE RETAINERS

NOW, a specially Designed Truck-Cab Heater-Defroster EVANS ENGINEERED

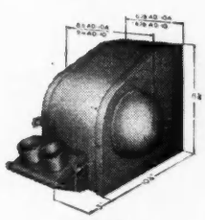


. . . with an Oversize Core, Superior Defroster—Fits All Models

Heating the cab and defrosting the windshield of a highway snow plow are just about the toughest jobs for a truck cab heater. The new EVANS heaters were originally designed for such jobs. They have a high-pressure motor-fan combination, engineered especially to provide the utmost in driver comfort, defrosting, safety and economical operation in all kinds of weather. The oversize heater core provides a constant flow of warm air which can be adjusted to direct one-fourth, one-half, or all the heat toward the driver. (Models AD-10 and AD-10A are identical, except that driver's and defroster outlets are raised to clear engine housing in model AD-10.) There's an EVANS truck cab heater to fit *your* truck—it's ready for delivery now.



AD-10



AD-10A

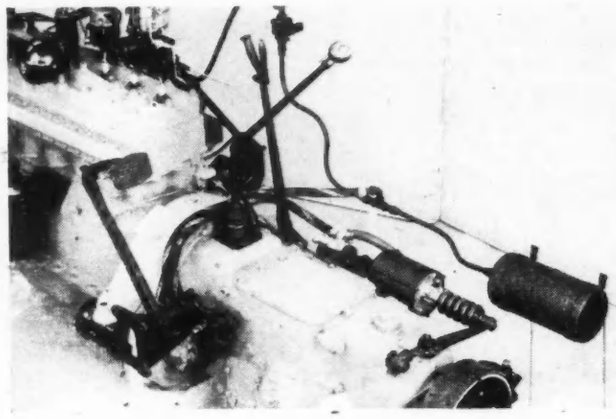
Write direct to us for literature, or call your local distributor for information.

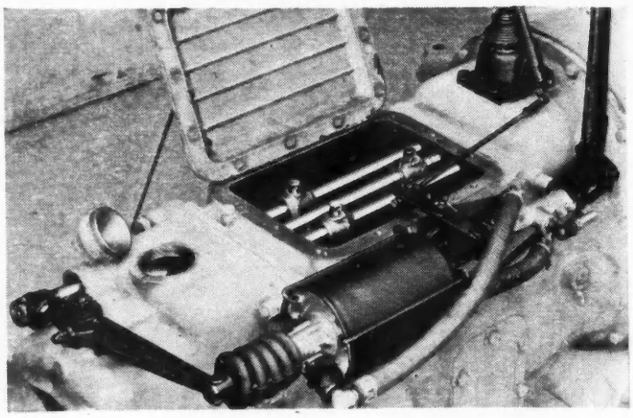
THERMO-AIRE DIVISION

EVANS

PRODUCTS COMPANY

DETROIT 27, MICHIGAN





Upper Left—Mack Duplex 10-speed transmission, showing master valve operated by clutch pedal; selector valve operated by gearshift lever flipper; vacuum cylinder, shifting beam; vacuum reservoir. Right — Another view of transmission with filler cap and inspection plate removed, showing close-up of vacuum cylinder and selector valve, with mechanical connection to flipper

D & G REFRIGERATORS *for* TRUCKS and TRAILERS

. . . REALLY DOING A SWELL JOB!

Shippers and Haulers everywhere are enthusiastic about the D&G Truck & Trailer Refrigerator. They know, by actual experience, that their D&G is *Always* dependable —that ice and salt are *foolproof*. Whether loaded pre-chilled or at field heat, perishables are safe!

D&G Refrigerators (equipped with Ventilator Doors when requested) have ample capacity for most all perishables—permit greater pay-loads, hold up to 2000 lbs. of ice, and are the last word in downright simplicity. D&G Units actually outlast the truck or trailer—are low in both first cost and operating cost. Write us for full facts, today!

DROMGOLD & GLENN
1419 McCORMICK BLDG. · CHICAGO

MACKS MONO-SHIFT

(CONTINUED FROM PAGE 220)

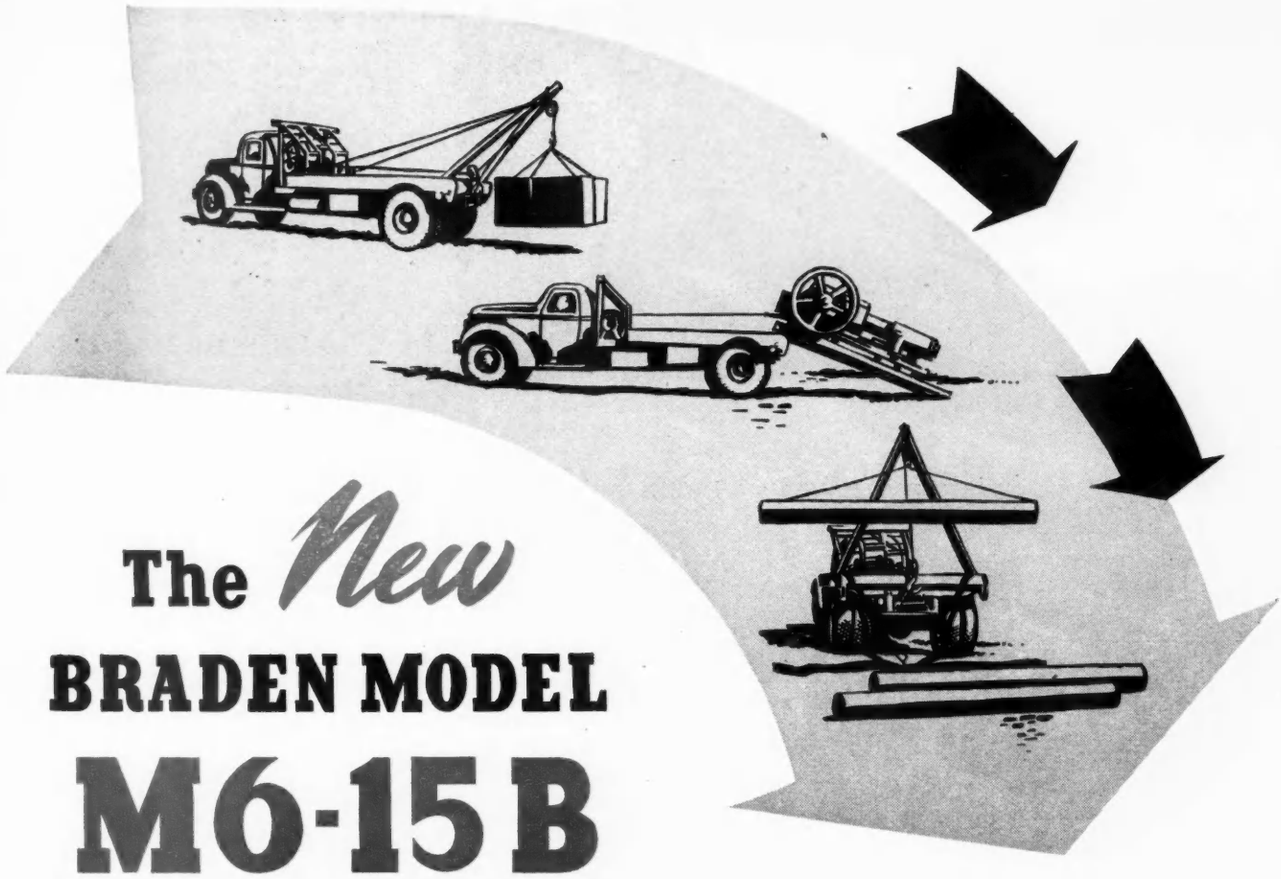
Quick, certain, clashless shifts are said to be assured by the use of a shift synchronizer of an entirely different design than used heretofore, the Mack multiple-disk type, designed specifically for heavy-duty service. Its positive balking action makes it impossible for the teeth of the shifting clutch to engage until their speeds are synchronized. By the use of multiple-disk friction elements, synchronizing action of such power is produced that almost instantaneous effect is obtained.

Shift Mechanism Simple

ESSENTIALLY, the Mono-Shift is quite simple, comprising a single vacuum power cylinder for actuating the two-speed compound shift. This cylinder is supplied with atmospheric air and vacuum from a selector valve, controlled by the flipper on the gearshift level ball. A flexible shaft within the tubular lever connects the two. Where a diesel engine is used, air operation can be made available instead of the vacuum power cylinder.

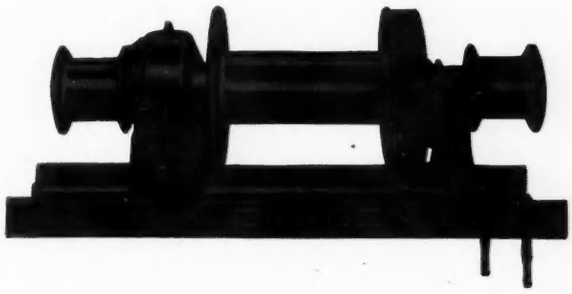
Forming a part of the clutch release rod is a simple disk-type

(TURN TO PAGE 224, PLEASE)



The *New* BRADEN MODEL M6-15B

The M6-15B is one of the NEWEST models in the Braden "M" Series line of truck winches. It has already proved to be one of the most versatile truck winches on the market, and is used extensively in the construction, electric and petroleum industries. The M6-15B is equipped with the NEW Oil Cooled, Fully Adjustable, Automatic Safety Brake; and is fully guaranteed. For complete information see your nearest Braden Dealer or write to the factory for catalog.



Safe Working Load 12,000 lbs. For use on 1 and 1½ ton trucks. Furnished with one speed forward and one reverse power take-off, or two speeds forward, one reverse power take-off and all driving and mounting parts.

BUY BRADEN - *They are Safer*

BRADEN WINCH COMPANY
1001 East Admiral Boulevard

BRADEN *Winches*

TULSA 3, Oklahoma

Charles G. Morgan, Jr., of the American Trucking Assn. presents Robert I. Gayley of the Supplee Wills-Jones Milk Co. of Philadelphia, with the Auto-Lite Spark Plug safety award. Looking on is Everett J. Alger of the George F. Alger Co., Detroit, Mich., Joseph Grumme, Silver Fleet Motor Express, Louisville, Ky., also winners, and George Teets of the Electric Auto-Lite. The awards were made at the ATA convention in Cincinnati

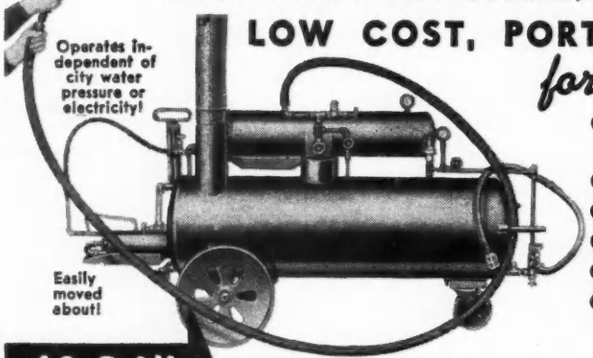
Save COSTLY MAN HOURS! Speed REPAIR WORK!
Equip FOR SERVICE! Equip TO . . .
CLEAN with STEAM
SIEBRING
STEAM CLEANER

OPERATES Economically! Burns low cost commercial fuel oil or gas! Electric units also available!

Makes QUICK WORK of Tough Cleaning Jobs! Cuts Grease and Grime in a Hurry!

A big asset in any repair shop or service station! A time and money-saver. ALSO A MONEY-MAKER! The Siebring PORTABLE Steam Cleaner prvoides instant steam, hot water or a combination of the two UNDER PRESSURE for fast cleaning on the toughest grease and dirt packed jobs. First it knocks loose, then it dissolves and quickly removes hardest packed dirt, grease and grime. Penetrates crevices and corners. Does a BETTER job in HALF THE TIME!

Operates independent of city water pressure or electricity!



Easily moved about!

LOW COST, PORTABLE UNIT for CLEANING
- and WASHING AUTOMOBILES
- AUTO MOTORS
- MOTOR PARTS
- TRUCKS
- TRACTORS
- and OTHER TOUGH JOBS!

10-DAY Free TRIAL OFFER!

YOU RISK NOTHING! . . . Let us put this remarkable automatic steam cleaner in your shop for 10 DAYS' FREE TRIAL. See for yourself how simple it is to operate; how economical, safe and service free! Write for descriptive literature and details of our 10 Day "Free Trial" offer.

SIEBRING MANUFACTURING COMPANY
501 MAIN ST., GEORGE, IOWA

MACK'S MONO-SHIFT

(CONTINUED FROM PAGE 222)

master valve, supplying vacuum from the intake manifold to the selector valve. The selector valve merely determines on which side of the actuator cylinder the vacuum and atmospheric air will be admitted, while the master valve supplies the necessary vacuum connection. Thus, preselection by means of the flipper is possible, and the actual shift is effected only when the clutch is released.

The master valve, known as the clutch interlock valve, operates against a calibrated spring preload and opens only when sufficient effort is exerted on the clutch to start the plates separating. By this means the valve is synchronized accurately with the clutch regardless of wear or adjustment of the latter and without requiring adjustment of the valve. All connections, both vacuum and mechanical, are external and readily accessible.

Located just in front of the gearshift lever ball, the flipper is moved at a touch of the finger, positively clicking into one position or the other. Both because of this action and because both the spool-type selector valve and the shifter rail are made without provision for a neutral position, the compound cannot be neutralized.

Instantaneous response is assured by a separate vacuum reservoir, guarded by a check-valve, providing power even when a wide-open throttle may temporarily lower the manifold vacuum. The ample size of the vacuum cylinder is conducive to quick action.

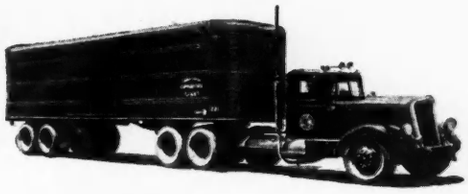
Aside from greatly improved performance, an even greater benefit is claimed in fuel economy realized as the result of the greater availability of more appropriate ratios for every operating condition.

Because it is the *ONE* Belt *Specially Engineered* For TRUCKS and BUSES!

Are YOU Still Using PASSENGER CAR BELTS on YOUR Trucks or Buses?

You would certainly never even think of using passenger car TIRES on your trucks or buses. Then why use passenger car BELTS?

You realize, the moment you think of it, that trucks and buses put a heavier load on belts just exactly as they do on tires.



Isn't it natural, then, that a passenger car belt on a truck can not possibly give you anything like the long, trouble-free service given by the belt that is specially engineered for trucks and buses--the Gates Truck Belt?

Look at the cross-section drawing of the Gates Truck Belt on the preceding page. Note the special cord section, the 30% stronger cords, the stronger, tougher, multiple-ply cover of more than *double* durability. Is it any wonder the biggest users of truck belts in the U. S. have found that this Gates Truck Belt gives them 50% to 80% longer wear?

Even more important--note in the statements of these experienced and practical operators, how much valuable *operating time* they are *saving* through fewer road failures and fewer delays for servicing.

Surely it is just as important to you as to them to keep *your* trucks and buses operating most efficiently and economically. If this is true, the wisest move you can make is to call your jobber right now and tell him to send you a trial order of Gates TRUCK Belts.

Gates Jobbers Now Have Stocks to Serve You

THE GATES RUBBER COMPANY
DENVER, U. S. A.
World's Largest Makers of V-Belts

Gates

THE MARK OF SPECIALIZED RESEARCH

T 464

MANY MORE MILES

GENEVA, N. Y.
". . . many more miles of service than even pre-war belts."
Market Basket Corp.

WEARS 75% LONGER

NASHVILLE, Tenn.
". . . gives about 75% longer wear than any other belt we ever used."
Wilson Truck Co., Inc.

CUTS SERVICE DELAYS

OAKLAND, Calif.
"We are getting fully 75% longer wear with corresponding reduction in servicing time and belt adjustment delays."
Carnation Milk Co.

50% LONGER SERVICE

DES MOINES, Ia.
". . . is giving about 50% longer service over even pre-war belts."
Iowa Road Building Co.

50% TO 60% MORE SERVICE

JARREL, Tex.
". . . giving 50% to 60% more service — far the best we've used."
Jarrel Motor Co.

80% TO 100% BETTER

KANSAS CITY, Mo.
"Gates Truck Belts are doing an 80% to 100% better job for us."
Adams Transfer and Storage.

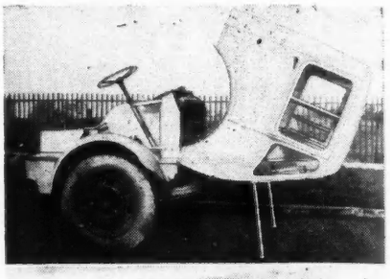
British Tilting Cab Boon to C.O.E.'s

AN interesting forward-hinged tilting cab, adaptable to a number of different c.o.e. truck models of both British and American make has been developed by G. E. Neville & Son, Ltd. of Mansfield, England. Patent rights have been applied for in all principal truck manufacturing countries.

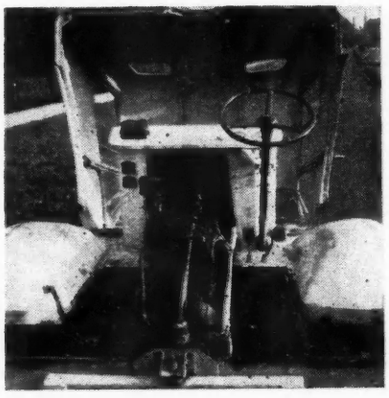
The cab is made in two parts divided either at or near the floor level, the upper part being hinged near the bottom of the radiator. By removing six nuts two men without mechanical assistance can tilt the cab forward in three minutes, according to the manufacturer. This exposes the engine sufficiently for most tune-up operations and most minor repairs.

Two folding legs are provided near the cowl which hold the cab in suitable position when raised. Wiring is so arranged that it need not be disturbed.

In an additional six or seven minutes, the manufacturer states, flooring, seats and batteries may be completely removed exposing the engine for major repairs or removal. Clearance is said to be such that transmission and engine may be removed or installed without disturbing any of the accessories, thus permitting accurate adjustments and block testing before installation. It is not necessary to remove the radiator, and estimated time for an engine change on some models is two hours.



Top. The Neville cab is swung forward so that the complete power plant is accessible. It rests on folding legs in this position. Above. The cab is locked in position with six bolts



Most tune-up operations and minor repairs can be made with cab tilted

RIGHT DOWN YOUR ALLEY

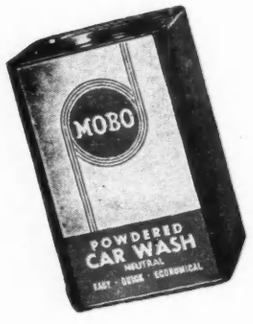
You can always depend on MOBO'S "striking" advantages to do a *better* and *faster* washing job on an amazing low cost basis.

Here's why MOBO cuts down job costs—

Washing time is reduced by one-half.

Washing method is simple—just apply solution with towel and hose off—no wiping dry necessary.

MOBO is economical to use. An ounce of liquid MOBO SUPER AUTO WASH or a teaspoon of MOBO POWDERED CAR WASH mixed with 12 quarts of water makes an effective cleansing solution—removes dirt, dead insects and hard grease spots—restores car lustre. All finishes are preserved — including waxed surfaces.



MOBO *must* be good — it holds a 45-year service record for cleaning trucks, buses and passenger cars. It is demanded by fleet owners, car dealers, garage men and gas station owners. Order now for prompt shipment.

JOHN T. STANLEY CO., INC.

642 West 30th Street **New York, N. Y.**

EXCELLENT SERVICE RECORDS . . . on military vehicles and planes . . . on commercial trucks and buses . . . and now on airline equipment . . . testify to the important new advantages of rayon cord tires.

These records . . . including Army proving ground tests . . . show that under conditions of sustained operation and heat as well as over rough terrain, rayon cord tires give substantially better performance.

Scientific research explains rayon's superiority clearly. For rayon is stronger, of more uniform size, permits a cooler-running tire, and withstands almost infinite flexing.

That's why, in such a wide variety of services, rayon cord tires cause fewer road delays, allow higher running speeds, and provide lower operating costs, fewer maintenance problems, greater safety, and longer tire life.

with Rayon Cord Tires

RAYON CORD TIRES ACHIEVE RECORD IN SAFETY AND DEPENDABILITY . . . *Pan American World Airways*

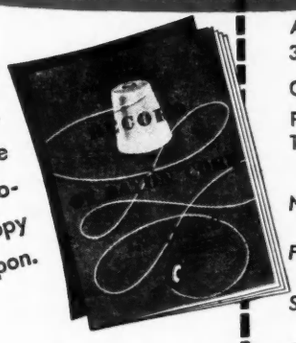
Henry H. Berke, Assistant Vice President, Services of Supply, Pan American World Airways, states: "Successful world-wide air transport operations are tied in with dependable and safe tires. Rayon cord tires used on Pan American World Airways equipment have excellent 'Service Records' . . . have fully proved their worth."

AMERICAN VISCOSE CORPORATION

America's largest producer of rayon

Offices: 350 Fifth Avenue, New York 1, N. Y.; Charlotte, N. C.; Philadelphia, Pa.; Providence, R. I.; Washington, D. C.; Wilmington, Del.

Our free booklet, "The Record of Rayon Cord in Tires," gives dozens of interesting facts about rayon cord that make clear its importance in tires of today and tomorrow. Order your copy now. Just clip and fill in the coupon.



AMERICAN VISCOSE CORPORATION Dept. CC-4
350 Fifth Avenue, New York 1, N. Y.

Gentlemen:

Please send me a free copy of "The Record of Rayon Cord in Tires."

Name_____

Firm_____

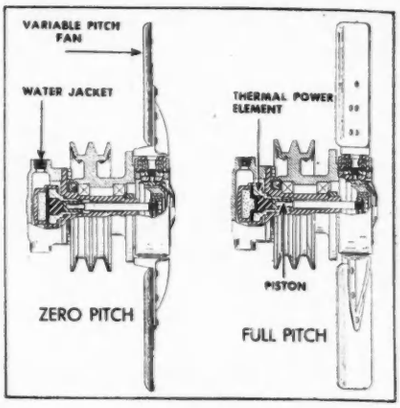
Street_____

City_____ State_____

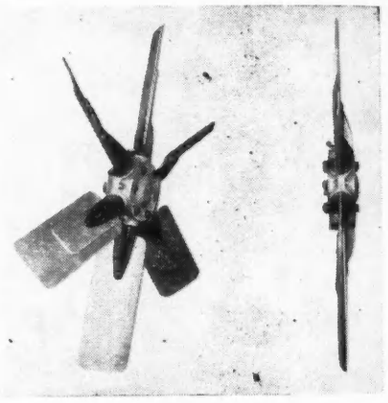
Variable-Pitch Fan Assures Even Heat

A NEW variable pitch, thermostatically-controlled engine fan, now available for heavy-duty trucks, has been announced by Evans Products Co., Detroit, Mich. Because its pitch is automatically controlled and infinitely variable from zero to maximum, extremely efficient control of engine temperature is assured without the necessity for radiator covers or interruption of coolant circulation.

A built-in thermostatic control is activated by coolant temperature. When engine is cold, pitch is zero. As engine warms up, pitch is gradually increased as needed.



The Evans fan automatically adjusts itself to produce economical operating temperatures by means of built-in thermal power element which changes pitch of blades as coolant warms up



The Thermo-Control fan at full pitch, left, and at zero pitch at the right

Basic advantages are at once apparent, not the least of which is the saving in fan horsepower consumption at all times except when maximum cooling is required. It is estimated that requirements for maximum cooling amount to less than 25 per cent of normal operating time. During all the rest of the time the variable pitch fan is drawing less than normal or no horsepower at all.

By virtually eliminating the evils of overcooling, appreciable savings are effected in fuel consumption and engine wear. Sludge formation is greatly reduced, thus prolonging the life of engine oil and filter elements between changes. The inherent danger of cracked cylinder heads or piston failures, caused by sudden changes in operating temperatures, particularly in hilly terrain, also is greatly reduced.

He found the Answer ...

BEFORE the appearance of the cotton gin, picking the seed out of cotton by hand yielded only one pound a day for every worker. Eli Whitney's history-making invention, patented in 1794, boosted the output to fabulous figures. Whitney found the answer in a spike-studded cylinder that pulled the "lint" through narrow slots, leaving the seeds on the other side.

YOU will find the answer to your Fuel Pump and Carburetor repair problems in Hygrade Replacement Parts — "Engineered for old units." Put up in convenient Contain-All Kits — the easy, profitable way to handle jobs in these vital branches of overhaul.

OTHER HYGRADE PRODUCTS
SPEEDOMETER PARTS "SHOCK" PARTS
FUEL LINES AND FITTINGS

From your jobber

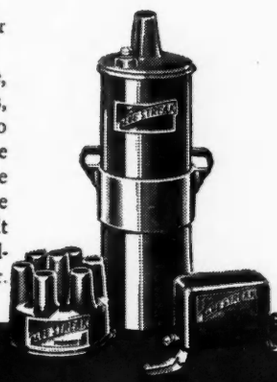
HYGRADE PRODUCTS CO., INC.
535 Thirty-fifth St., Long Island City 1, N. Y.

Carburetor and Fuel Pump Parts
by HYGRADE
ENGINEERED FOR OLD UNITS
Hygrade Line AUTOMOTIVE PRODUCTS

Up On Top! . . . the maintenance crew. Below . . . a doctor rushes to mend a broken leg . . . trucks heavy with food for a teeming population inch across . . . and thousands more motorists roll over the bridge each day. The men on top must make it safe for them to travel.

That's the kind of responsibility you lay down for *your* repair crew. And even more. Because it isn't just a *safe* haul you want — it's a longer one . . . under heavier loads . . . with less down-time.

When you ask for that kind of service, you're asking for Blue Streak Ignition Parts, too. Because here are parts that are built to do the out-of-the-ordinary — last longer . . . take brutal climbs without complaint . . . and save gas, besides. Blue Streaks can do it, because they get the best in raw materials . . . even if it costs us more. And every single part is individually inspected . . . even if it takes us longer.



BLUE STREAK
IGNITION PRODUCTS

STANDARD MOTOR PRODUCTS, INC.

New Clark Trucloaders Save 75% Loading Time

DESIGNED to save three quarters of unnecessary unskilled labor now devoted to loading and unloading motor trucks, the new method of car-loading developed by Clark Tructractor, a division of Clark Equipment Co., takes its place among the modern mechanical developments revolutionizing the transportation industry. The new Clark Trucloader for lifting, placing, stacking or tiering loads is offered in two models, the gas powered fork truck and the battery-powered unit. Both models are similar in design.

The battery-powered unit is equipped with front wheel drive, rear wheel steer, short wheelbase and has hydraulic brakes as standard equipment. The drive motor has a class B armature insulation, is specially designed General Electric series with sealed ball bearings of large grease capacity and easily replaced brushes.

The battery is an 18-cell, 11-plate heavy-duty type of any standard make, or the 30-cell unit of 190 amp.-hr. capacity may be used. The drive motor is mounted directly to the axle and drives through ring gear and pinion. Brakes are of the internal expanding, double-shoe type with 36 sq. in. of braking area. Controlled from a foot pedal, the drive motor is automatically disconnected when the brakes are applied.

The lifting unit is designed with a hydraulic gear type oil pump driven by a motor. It is easily controlled by a convenient lever-operating self-centered valve for lifting and lowering loads. The valve has a pressure relief which prevents overloading. The tilting unit is also hydraulically operated. The unit will tilt forward 5 deg. and backwards 10 deg. A hand lever at the driver's right operates three speeds forward and three in reverse.

The gas-operated model Trucloader is equipped with the same type of front-wheel drive, steering axle, brakes and lifting unit. The axle and transmission is an integral unit on this model, with front-wheel drive from the engine through an 8-in. single disc dry plate clutch. A special type steering axle mounted to the frame on center pivot is held in line by torque arms.

The power plant is a 4-cylinder engine of the industrial tractor type. It has a bore and stroke of 2⅛ x 3½ in., displacement of 50 cu. in. and is

(TURN TO PAGE 236, PLEASE)

PROTECT YOUR NEW TRUCKS from the start—*before* taking delivery. That, Mr. Fleet Owner, gives you a big advantage . . . assures you right from the beginning of a truck that will not only last longer, but also operate day in and day out with less attention, fewer repairs. You'll save money—in 11 different ways.

Specify Hoof Governors . . . Seal Type . . . or Key Type, with standard, or special series locks if you have a master number. Be sure you get your copy of "Everything under Control"—the new Hoof Governor Manual. Send for it today.

HOOF PRODUCTS COMPANY
6543 South Laramie Ave., Chicago 38, Ill.

HOOF GOVERNORS SET THE PACE

TWO HUNDRED EIGHTY TIMES AROUND THE WORLD PROVES . . .

Porous Chrome*

PISTON RINGS

better in Every Way

IT'S ALL HEADLINES ABOUT A-H POROUS CHROME RINGS!

Fleet Operators To Profit By New Development!

Proved By Seven Million Miles Of Road Tests!

Tested In All Types Bus And Truck Engines, All Types Of Service!

Porous Chrome Rings . . .

. . . Quadrupled Time Between Engine Overhauls
. . . Reduced Normal Cylinder Wear One-Half
. . . Lowered Oil Consumption For Longer Period
. . . Seated Instantly . . . No Break-In Troubles

Porous Chrome Piston Ring Sets For Truck And Bus Engines Ready Now. Call Your American Hammered Jobber.

ANOTHER
American Hammered
RING LEADER

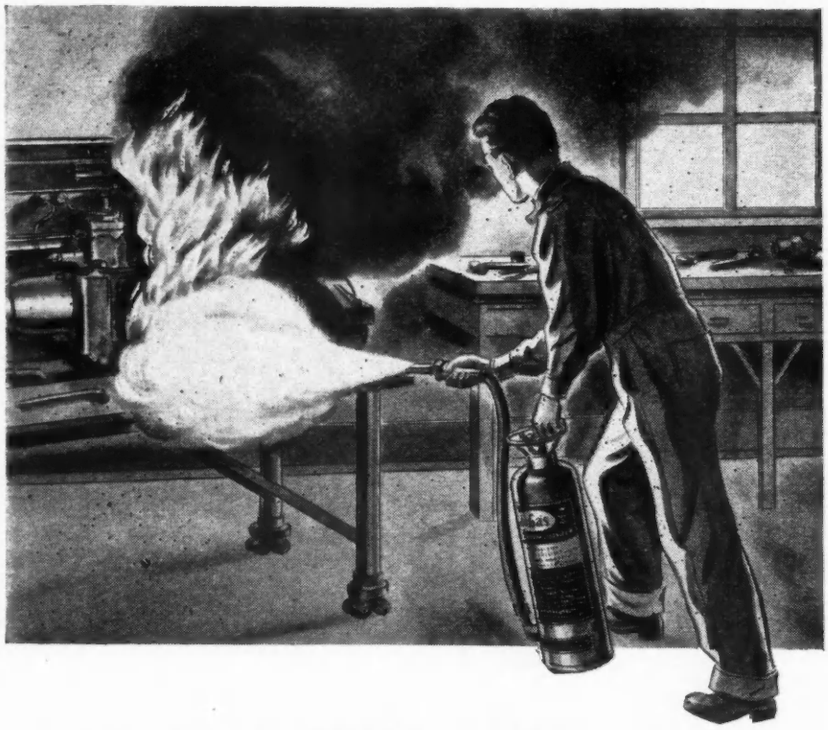
Chrome piston rings are an original American Hammered development.

* Van der Horst process

Koppers Company, Inc., American Hammered Piston Ring Division, Baltimore, Maryland

American Hammered Piston Rings

A KOPPERS PRODUCT



INSTALL DUGAS EXTINGUISHERS AT THESE HAZARD SPOTS

- Gasoline and Oil Storage and Handling
- Repair and Maintenance Shops
- Paint Spray Operations
- Welding Operations

STOP FIRE *FASTER*

WITH

AN ANSUL PRODUCT
duGas®
*REG. U.S. PAT. OFF.
THE MASTER OF FLAME

DRY CHEMICAL

● Upon striking fire, DUGAS Dry Chemical instantaneously releases 1,100 times its volume in flame-smothering gas that chokes off fire in seconds. The swift, fire-stopping power of DUGAS Dry Chemical is unaffected by wind or draft. It is undiluted by passage through the air. The gas is released only in the immediate flame area.

Dangerously close approach to flames is eliminated because the stream of dry chemical is expelled under high pressure, permitting safer and longer range fire extinguishing operation.

Amazingly fast and effective, DUGAS Extinguishers provide more fire protection . . . per pound . . . per unit . . . per dollar . . . against all types of oil, gasoline, grease, paint, and electrical equipment fires. **And DUGAS Extinguishers Can be Recharged on the Spot.**

DUGAS 15-T HAND EXTINGUISHER

GET THE FACTS ON DUGAS EXTINGUISHERS

Write today for further information including authoritative, impartial data showing characteristics of all types of approved fire extinguishers. The Ansul technical staff of fire protection engineers is ready to serve you.

Listed and approved by Underwriters' Laboratories and Factory Mutual Laboratories.

SEND FOR BULLETIN No. 923

ANSUL CHEMICAL COMPANY
FIRE EXTINGUISHER DIVISION, MARINETTE, WISCONSIN

CLARK TRUCLOADER

(CONTINUED FROM PAGE 234)

rated at 11½ hp. at 18 r.p.m. The carburetor is of the updraft type, provided with fixed jets to take care of all running and idling conditions.

The engine is equipped with a governor, distributor and coil type ignition, with a voltage regulator, battery and self-starter. The cooling system is of the thermo-siphon circulating type, with a tubular radiator. The engine is equipped with full-pressure lubrication system to all connecting rods and main bearings and cam shaft bearings.

The gas Truckloader has a forward speed of 5½ m.p.h., a reverse speed of 4.9 m.p.h. The speeds are controlled by a lever mounted on the seat plate support. The clutch and brake are operated by foot pedals. An accelerator is standard equipment.

Clark Truckloaders may be obtained with either solid or pneumatic tires, size 4.00 x 8, front, and 4.00 x 4, rear. The capacity of either model is 1000 lb. Industrial fork trucks and larger models are also built by Clark.

PREFER RAYON CORD TIRES

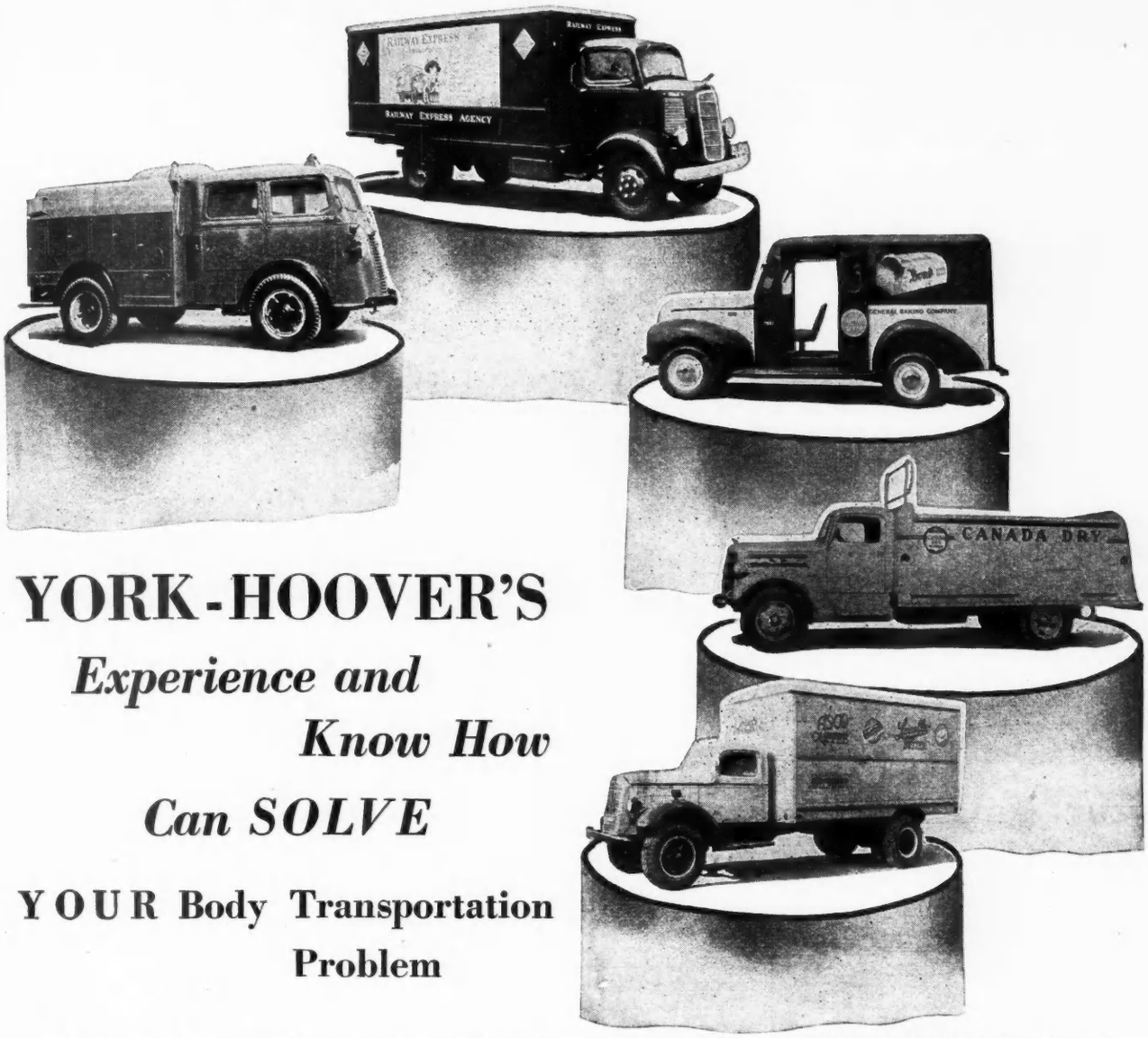
According to the results of a nationwide survey just completed, 55 per cent of the car-owning public prefer rayon cord in their tires while only 17 per cent favor cotton. The remaining 28 per cent are undecided.

Embracing the opinions of 1389 motorists and conducted by the Graham Research Service for the American Viscose Corp., the survey was representative as to geographic area, sizes of cities, makes of cars owned, and age and economic status of the people interviewed.

While the overall sentiment was 3 to 1 in favor of rayon, the opinion among men, whose opinion counts most in tire purchases, was 4 to 1. Of those preferring rayon, almost 85 per cent did so for reasons of greater strength and wearing qualities, the most characteristic properties of rayon.

Compared with the 85 per cent who favored rayon for reasons of strength and wear, only 54 per cent of the cotton advocates expressed their preference in these terms. Most of the remainder had no experience with rayon and based their preference on past satisfaction.

Among tire performance characteristics 60 per cent of the people considered safety from blowouts as most important, 20 per cent rated long mileage most desirable, 17 per cent favored ability to stand hard usage, and only 2 per cent rated easy riding first.



YORK-HOOVER'S

Experience and Know How Can SOLVE

YOUR Body Transportation Problem

54 years and more of constant contact with the transportation industry—solving Body problems—all kinds—day in and day out, is an experience we will gladly share with you.

Add to this wealth of experience the most modern facilities for Body construction and production and there is just one more factor to add: The well known YORK-HOOVER policy of Quality—your final assurance of low "per package" delivery cost.

We are anxious to offer all or any part of our facilities to accomplish for you what we have succeeded in doing for others.

Be "Body-Wise" Consult York-Hoover—NOW!

ARMY E NAVY

YORK-HOOVER CORPORATION

BODY DIVISION **YORK, PENNSYLVANIA**

YOU'LL do better with WEL-EVER!

You'll do better 3 ways with a Wel-Ever "H" Set in any truck!

1. A Better Job

Power-packed and oil-thrifty, "H" Sets get the nod for performance ALL THE WAY . . . they can take it and dish it out, cross-town or cross-country!

2. Better Mileage

"H" Sets get you there and get you back . . . ON TIME! Precision-engineered from casting to carton for stamina, power and fuel economy.

3. Better Installation Time

"H" Sets save labor and labor cost on installation because easily, quickly installed. Free-running, they require no "breaking-in" period.

Why be satisfied with less than "H" Set performance? Ask your jobber or write The Wel-Ever Piston Ring Co., Toledo, Ohio.

RE-RING WITH H PISTON RING Sets

The WEL-EVER Line

DETROIT DISPATCH

(CONTINUED FROM PAGE 98)

operating casts mounting dizzily, their profit position is in peril. One spokesman said that a report on all fleets in the country running a million miles or more last year shows that very few made any money and many actually wound up in the red. Although some slight relief was afforded by an increase in LTL rates, it has been entirely inadequate and falls far short of meeting increased costs. A typical example is that of a company here that operates a large fleet of over-the-road and city trucks. The company had estimated that the rate increase would apply to about 40 per cent of its volume. Actually, when shippers learned about the increase in LTL rates and altered their shipping habits, it developed that only about 20 per cent of the volume was affected, with the result that the net gain in revenue was about 5 per cent. Yet wages alone for this particular operator are up 10 to 15 per cent over last November, to say nothing of other direct and overhead costs.

40-Hr.-Week Worry

Another development worrying fleet operators here is the possibility that labor will demand time and one-half for work over 40 hours a week, even though the present contract calls for a 48-hour week. Two cases already are in Federal Court on this question and an adverse decision would pile another burden on the already sagging operators.

Tire Bright Spot

With all the grief facing the industry from lack of equipment, labor trouble, and inadequate rate relief, there is one possibly bright spot. A recent visit to tire manufacturers reveals that plenty of tires in most sizes will be available by mid-summer. In addition, they will be much better tires than have been available during the last year, and there is a possibility that they may not cost quite as much in a few months. The percentage of natural rubber to synthetic is being stepped up and with supply meeting or exceeding demand a buyer's market again will prevail. Consequently, these two developments should result in lower per-mile tire costs.

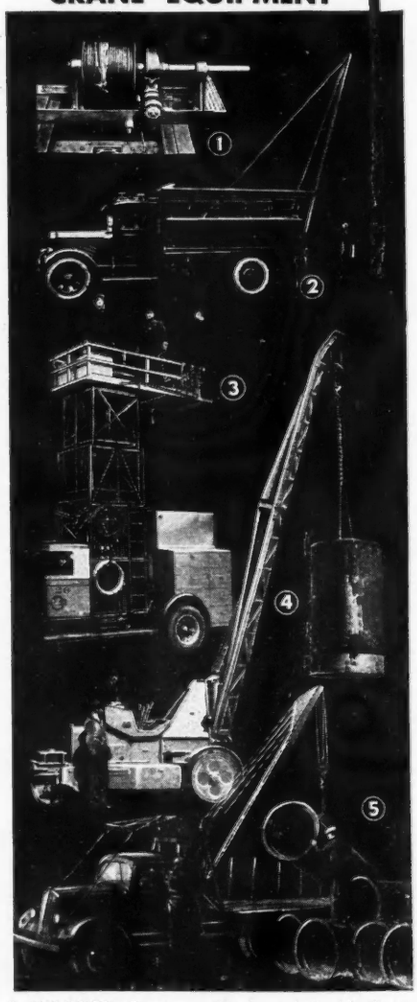
END

(Please resume your reading on p.100)

AUTOMOTIVE EQUIPMENT by "SILENT HOIST"

Pioneer Mfrs. of

TRUCK WINCH AND CRANE EQUIPMENT



1. WINCHES: Capstans; Single and Double Drum, Jaw Clutch, Keyed and Friction Clutch Winches. 2,000 to 50,000 lb. Capacities.

2. SILENT HOIST Tripod Pole Setting Derricks are used by municipalities and public utilities throughout the country. Furnished with "Silent Hoist" Jaw Clutch or Keyed Drum Winch, or without winch for truck already provided with one.

3. Power Operated Telescopic-Section Truck Tower. Electrically welded steel, 2 or 3 sections, plain nest type or revolving platform, as desired.

4. KRANE KAR Swing Boom Mobile Crane. For materials-handling . . . lifting, transporting, positioning. Gasoline or Diesel, one to 10 ton capacities, 12 to 32 ft. booms (or telescopic booms). Self-stabilizing without jacks or outriggers; unobstructed vision, fast, flexible, safe, easy to operate. Solid or pneumatic tires.

5. Truck Crane handling pipe. Powered by truck motor; high capacity; takes up only a small space. For handling transformers, cable reels, lamp posts, trees, poles, manhole castings, etc. One to 10 ton capacities.

USERS: Gen'l Motors; Chrysler; AT&T; Cons. Edison Co. of N.Y.; Western Union; Penn. RR; Texas Power & Light; etc.

WRITE FOR CATALOGS:

No. 58–KRANE KAR *No. 60–Truck Equipment*

THE ORIGINAL SWING BOOM MOBILE CRANE WITH FRONT-WHEEL DRIVE AND REAR-WHEEL STEER

2½, 5, AND 10 TON CAPACITIES

KRANE KAR

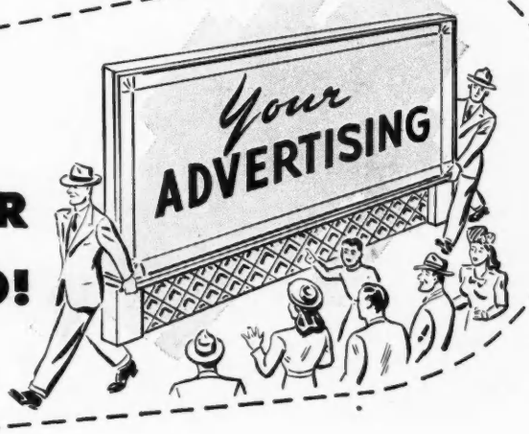
TRADE MARK REGISTERED

SILENT HOIST & CRANE CO.

852-63rd ST., BROOKLYN 20, N. Y.

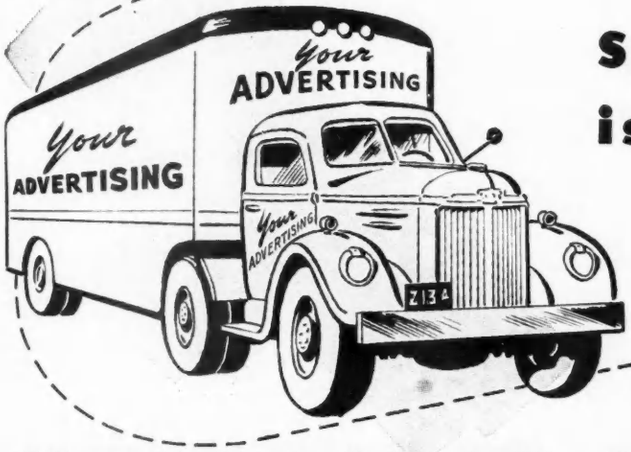
YOU WOULD HAVE TO PAY FOR THIS ADVERTISING!

(If you wanted it)



YOU WOULD PAY FOR THIS ADVERTISING TOO!

(If you could get it)



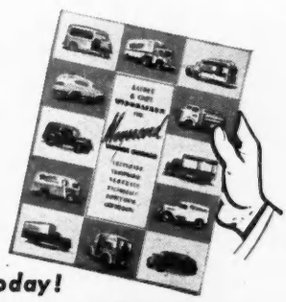
Space on your trucks is FREE . . . USE IT . . .

(And let your trucks pay for themselves in the process)

with

MEYERCORD TRUCK DECALS

Thousands of new trucks will soon be added to America's fleets. They offer acres of advertising space . . . *cost free!* Fleet-owners who sell space on their trucks have established annual advertising values up to $240.00 for side panels alone. The same space on your trucks is worth as much to you. Cab doors, roofs, backs and visors offer additional value too. Use these areas with Meyercord's durable, washable and weather-tested Truck Decals and help your trucks pay for themselves! Trademarks, lettering, product illustrations, all can be reproduced in any colors, size or design. Over-night application saves paint-shop delays . . . and Meyercord Decals are economical for a dozen trucks or a thousand. Send for full details. Address inquiries to Dept. 32-4.



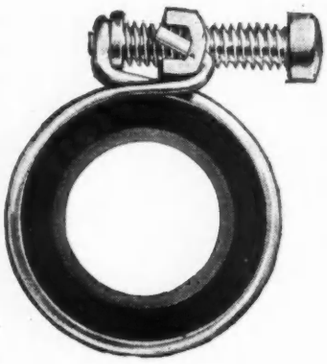
FREE! This Truck Visualizer, Will Help You Plan; Send For It Today!

THE MEYERCORD CO.

World's Largest Decalcomania Manufacturers

5323 WEST LAKE STREET • • • CHICAGO 44, ILLINOIS

ONE
new
HOSE CLAMP
that's different!



ONLY
the CENTRAL "360"
HAS *ALL* THESE FEATURES
"By every test 360's the best"

ONLY THE "360" forms a complete circle, with no "blind spot."

ONLY THE "360" has the new "push-pull" power principle.

ONLY THE "360" has such a wide margin of take-up on the screw.

ONLY THE "360" applies pressure all the way around the hose *evenly.*

ONLY THE "360" prevents leakage *from any point* around the hose.

Write today for your FREE sample of Central's "360" Wire Hose Clamp and Bulletin Number 4446.
CENTRAL EQUIPMENT CO.
900 S. Wabash Ave., Chicago 5, Ill.

CCJ NEWSCAST

(CONTINUED FROM PAGE 153)

ATA WINS AWARD

Claim prevention activities of American Trucking Assns., have won for that organization an award for "one of 1945's outstanding achievements in public relations" from American Public Relations Assn.

The trophy, in the form of a mounted silver anvil, symbolical of the forging of public opinion, was awarded to President Ted V. Rodgers at the annual meeting of APRA held at the Statler Hotel in Washington, D. C., on March 30 and attended by 1500 leaders of American business. Identical awards were made also to other outstanding firms and organizations representing a cross-section of American business, social and religious activity.

ATA's award came as a result of a year's intensive drive on the claim situation within the for-hire branch of the trucking industry. Mounting dissatisfaction with trucking industry claim handling came to a head in 1944, when certain shipper organizations openly expressed displeasure with the industry's performance in this respect. ATA immediately took steps to revitalize claim groups throughout the country, doubling the number of such units in 1945; took the message of better claim practice and claim prevention direct to the trucking industry in bulletins, posters and direct advertising space. A sound slide film on claim prevention was also prepared by the Freight Claim Section and the Public Relations Department for widespread use by truck operators.

NEW ARROW LINE

The Arrow Safety Device Co. of Mount Holly, N. J., has announced that licensing arrangements had been made with the A.G.A., trustee, for the use of the Stimson patented plastic and glass reflex-type reflectors and lenses. Arrow is licensed to use these in its line of automotive-lighting and safety-device equipment and for sale as replacement parts.

HOLLUP OFFERS CHART

A 6-page selectrode chart recently issued by the Hollup Corp., a division of the National Cylinder Gas Co., Chicago, guides electrode users in the choice of the correct electrodes for a specific job.

It tells which electrode to use, suggests applications, shows currents, positions, physical characteristics, etc. Included are electrodes recommended for mild, low alloy and stainless steels, non-ferrous and cast iron, surfacing, as well as gas welding rods.

A copy may be obtained free by writing to the company.

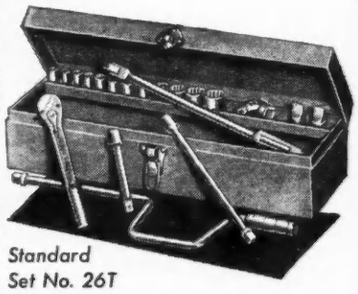
ELECTED HASTINGS DIRECTOR

Ross R. Dunn, sales manager of Hastings Mfg. Co., Hastings, Mich., was elected to the Hastings Board of Directors at the Annual Stockholders Meeting on March 19.

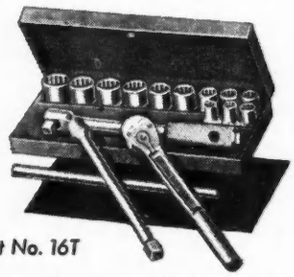
(TURN TO PAGE 242; PLEASE)

WALDEN WORCESTER
WRENCH SETS

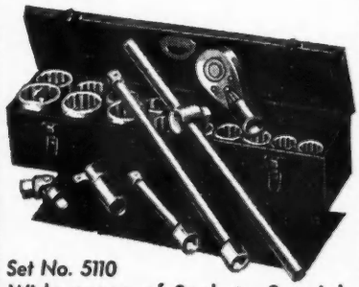
Engineered for Strength and to fit the mechanics need. Thousands of these sets have been sold here and abroad.



Standard
Set No. 26T
The Mechanics Favorite. Wide range of Sockets, Special Handles, Reversible Ratchet Wrench. 22 pieces in a Steel Box.



Set No. 16T
A very handy set of 17 pieces in a Steel Box.



Set No. 5110
Wide range of Sockets, Special Handle, Reversible Ratchet Wrench. 21 pieces in a Steel Box.

Send for Catalog No. 141 picturing a full line of Automobile, Aircraft and Radio Tools.
WALDEN WORCESTER WRENCHES
STEVENS WALDEN, INC.
468 SHREWSBURY STREET
WORCESTER, MASSACHUSETTS

Weigh these advantages of weight saving with American Magnesium's Extruded Shapes

You reduce the weight of your truck bodies by incorporating magnesium extruded shapes in those structures. Equipment is then better able to stand the swing and sway of high-speed travel.

American Magnesium's extruded shapes let you achieve the ultimate in lightness with safety and economy. This method of manufacture puts the metal exactly where it's needed. You avoid expensive building up of heavier and bulkier structural sections.

Body builders can get assistance in working magnesium extruded shapes into their designs by calling the near-by office of Aluminum Company of America. Or write Alcoa, Sales Agent for American Magnesium Products, 1719 Gulf Building, Pittsburgh 19, Penna.

MAGNESIUM MAZLO PRODUCTS

REG. U.S. PAT. OFF.

AMERICAN MAGNESIUM CORPORATION

SUBSIDIARY OF ALUMINUM COMPANY OF AMERICA

HALLOWELL

BRINGS YOUR TOOLS

WHERE
YOU WANT 'EM

WHEN
YOU WANT 'EM!

Fig. 1855

Follows you around like Mary's little lamb . . . this "Hallowell" Tool Stand with easy-rolling swivel casters! It stands up under plenty of hard wear too, for it combines rugged welded steel construction with the fine quality of "Hallowell" workmanship. A variety of styles and models are yours to choose from. The model shown can be equipped with drawer tier as shown, with a single drawer, or without drawers.

Welded steel construction makes this "Hallowell" Steel Stool wobble-proof. Adjustable spring posture back; heights from 14" to 36" inclusive.

Fig. 1249

Send for the Catalog of "Hallowell" Shop Equipment of Steel.

OVER 43 YEARS IN BUSINESS

STANDARD PRESSED STEEL CO.

JENKINTOWN, PA.
BOX 742

Boston, Chicago, Detroit
Indianapolis, St. Louis, San Francisco

CCJ NEWSCAST

(CONTINUED FROM PAGE 240)

Latest Welding Procedures Presented in Revised Book

"Lessons in Arc Welding," a revised and up-to-date new printing of the second edition, has been prepared to assist both new and experienced welders as well as all persons interested or concerned with the subject.

The 176-page book includes 61 lessons in arc welding and has over 200 photos and illustrations to supplement the text. From the very first paragraphs dealing with "Instructions to the Operator, to the 571 examination questions and answers given in the closing pages, the book sets forth in plain simple language, the practical instruction based on the experiences of Mr. Arthur Madson, head instructor in the Lincoln Arc Welding School. Mr. Madson has taught thousands of students to become practical, successful arc welding operators.

Polished with the objective of aiding those interested in welding to use the process successfully and economically, the practical welding guide explains the fundamentals of joining metals by the fusion principle and incorporates a wealth of new information such as how to apply the latest types of electrodes and welding techniques developed during the war years.

"Lessons in Arc Welding" is published by The Lincoln Electric Co., Cleveland, Ohio. The price postpaid in the United States is 50 cents a copy; elsewhere, 75 cents per copy.

(TURN TO PAGE 366, PLEASE)

"Maybe he can find out what's the matter with it."

OTC

MAINTENANCE TOOLS

Speed up

REPAIR JOBS

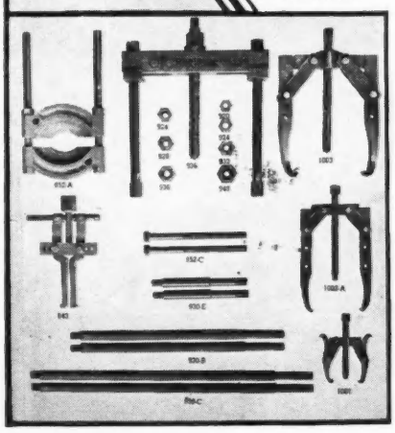
Use the OTC PULLING SYSTEM to remove and replace bearings, races, pinions, gears, sprockets, sleeves, collars, snap rings, hubs, wheels, shafts and other close-fitting parts and assemblies—EASILY, QUICKLY SAFELY! The only COMPLETE Puller Line—solves many tough pulling problems not handled by any other tools. APPROVED by Hyatt, M-R-C, New Departure, SKF and Timken. OTC means DEPENDABILITY.

OTC No. PE-12 SET (shown below) is a service-tested selection of OTC PULLERS, Attachments, Threaded Adaptors and Extension Legs to handle widest possible range of work on trucks, busses, tractors, and power equipment. Optional Service Board is 3' x 4', sturdy, convenient, attractive.

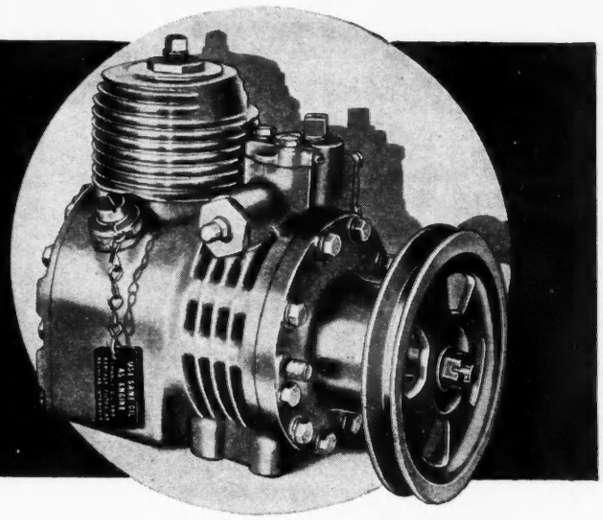
Ask Your Jobber or write for details

OWATONNA TOOL CO.
335 Cedar St.
OWATONNA, MINN.

Removing differential bearings on KR-11 International Truck.



Only **Wagner Air Brakes** have the **ROTARY COMPRESSOR**



Only the Wagner Rotary Compressor has ALL of these features so desirable in automotive air brake systems

1. Rotary motion of all moving parts.
2. In running balance at all times.
3. Longer belt life due to more uniform torque loading.
4. Low friction losses—therefore high operating efficiency.
5. A predetermined air pressure range automatically maintained.
6. Operating parts are lightly stressed, thereby insuring long life and low maintenance cost.
7. Extremely quiet in operation.
8. Self-contained oiling system—uncontaminated by engine waste products.
9. Compact—requires minimum installation space.
10. Low operating temperature prevents carbon formation in the compressor and delivery lines.
11. Adaptable to *all* types of automotive brake systems.

Wagner Air Brakes give "top" brake efficiency to all types of trucks, tractors, trailers, and buses. They are a product of the Wagner Electric Corporation, a company with twenty years of experience in the manufacture of automotive brakes.

This brake engineering knowledge, plus modern factory equipment and outstanding laboratory tests, has enabled Wagner engineers to produce air brakes that are far ahead of ordinary air brakes. This knowledge, too, has produced the phenomenal Wagner Rotary Compressor used in all Wagner Air Brake Systems. For complete description, write for Bulletin KU-50B and address your request to Wagner Electric Corporation, 6470 Plymouth Ave., St. Louis 14, Mo.

If interested in Wagner Air Brake Distributorship—Write at Once!

K46-6

Wagner WE Electric

LOCKHEED HYDRAULIC BRAKE PARTS and FLUID . . . NoRoL . . . CoMaX BRAKE LINING
AIR BRAKES . . . TACHOGRAPHS . . . ELECTRIC MOTORS . . . TRANSFORMERS . . . INDUSTRIAL BRAKES

Protect your brake jobs with Eis Products

BRAKE repair is the one branch of car overhaul that demands an absolutely "safe" job.

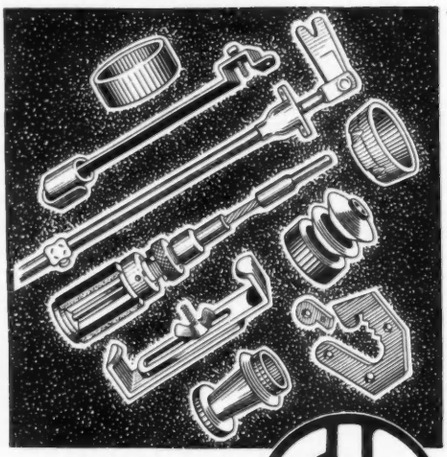
That is why so many leading brake stations have standardized on the Eis Line. Eis Brake Parts and Cables have established a nation-wide reputation for dependability over the long distance route. Their past performance record is a safeguard against failure and comebacks.

When you replace with Eis Products you protect your brake job—your customer—and yourself.

From your jobber.

Write us for literature.

The Eis Automotive Corp.
Middletown, Conn.



BRAKE PARTS
BRAKE FLUID
BRAKE TOOLS

EIS

THE LINE OF DEPENDABLE SERVICE

CCJ NEWSCAST

(CONTINUED FROM PAGE 242)

32,987 TRAILERS FOR 1945

The total production of truck-trailers for the full year 1945 was 32,987, as computed from the "Facts for Industry" reports issued by the Bureau of Census. Production for the first eight months of 1945 was 18,836, as reported to the WPB by the various trailer manufacturers authorized to produce trailers. The report gives production figures for the months of September through December, 1945, as 14,151 trailers.

C. W. PETERS JOINS N.H.U.C.

Charles W. Peters has joined the staff of the National Highway Users Conference as regional representative in the states of Kentucky, Tennessee, Alabama, Mississippi and Louisiana.

D. P. ALLEN PROMOTED

Thermoid Co., Trenton, N. J., announces the election of Dwight P. Allen as executive vice president. Mr. Allen has been vice president and director of manufacturing operations, and before that as head of sales to car manufacturers.

ONE MILLION TRUCKS FOR '46

Approximately one million motor trucks will be produced in 1946 if recent supply problems on part and components can be overcome, according to industry estimates made to the Civilian Production Administration.

However, with a truck demand far exceeding this estimate, CPA assured indus-

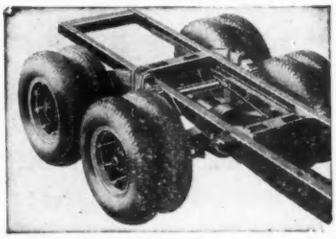
(TURN TO PAGE 368, PLEASE)

Hauls LARGER Payloads At Less Cost . . More Profits !

Equip Your Trucks with

LITTLE GIANT

TEN WHEELERS — FRAME EXTENSIONS



Ten Wheelers

Increases hauling capacity up to 20 tons. Keeps load in perfect balance — no teeter or end-sway. Extends frame from 42 to 50 inches. Simple, sturdy—no intricate parts, assures long life. Timken bearings, steel castings, hydraulic brakes. For 1½ to 5-ton trucks. Easily installed in 3 hours. Does not alter chassis. Complete with tires, if desired.

Frame Extensions

Cut-frame and slip-on types. Adds any desired length to chassis. Simple—sturdy—easily installed. Absolutely dependable — thousands in use.

PROMPT DELIVERY

Write for Complete Details and Low Prices

LITTLE GIANT PRODUCTS, INC.

1532 N. Adams St.
PEORIA 3, ILLINOIS

Be 100% With 10% • Buy Victory Bonds

CAMPBELL

Lug-Reinforced TIRE CHAINS

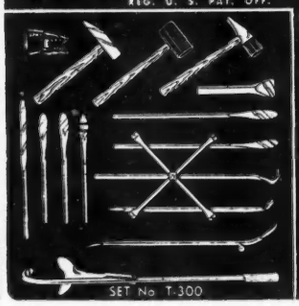
THE CHAIN WITH THE SAW-TOOTH GRIP

Greater Mileage Greater Safety

INTERNATIONAL CHAIN & MFG. CO., YORK, PA.

KEN TIRE TOOLS

REG. U. S. PAT. OFF.

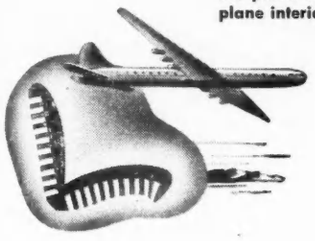


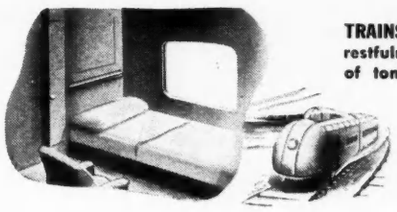
LEAD THE FIELD • ADVANCED DESIGN • QUALITY UNSURPASSED • SEE YOUR LOCAL JOBBER OR WRITE FOR LITERATURE •

KEN TOOL MFG. CO.
AKRON 5, OHIO

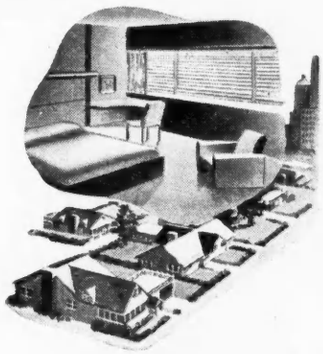
SET No T-300

PLANES: Koylon lightness fits plans for tomorrow's plane interiors.





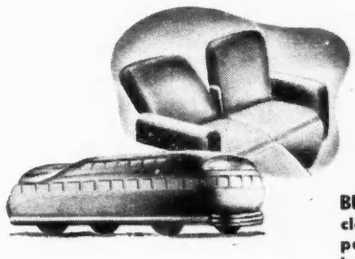
TRAINS: Koylon all-condition restfulness is ideal for the cars of tomorrow's streamliners.



INTERIORS: Koylon adaptability is especially suited for upholsterers and designers of tomorrow's interiors.

SERVING THROUGH SCIENCE

Built-in comfort for tomorrow's trucks and buses



BUSES & TRUCKS: Koylon clean, durable comfort is perfect for tomorrow's heavy duty business.

WHEN A PRODUCT ushers in a wonderful new era of comfort, it belongs in all your plans. Well, that's what Koylon did.

For eleven years, Koylon has proved itself the comfort cushioning of the age. It breathes comfort — the kind that will be appreciated by the user — the kind that means increased good will for you.

At every contact with the body, thousands of tiny Koylon latex cells release air. That's the famous Koylon breathing action — the secret of Koylon's comfort. It's also the secret of Koylon's resilience and natural cleanliness — dust-free, moisture-free, vermin-free.

Light, long-lasting, a single unit free of bothersome parts to wear out and lose shape — Koylon is both simple and amazingly inexpensive to maintain. It has proved its value in the past — and it belongs in the future. Particularly, Koylon belongs in your future plans.

Comfort Engineered

"U.S." *Koylon* FOAM

REG. U.S. PAT. OFF.

UNITED STATES RUBBER COMPANY

"U.S." KOYLON FOAM DIVISION • MISHAWAKA, INDIANA

ROADABILITY—ASK any truck driver whose anatomy is mounted on a truck that's mounted on TUTHILL Springs, and you'll learn what is meant by ***"Roadability"***. He's "at it" all day long—and with less bump-it-y-bounce, small wonder TUTHILL Springs add so much to driver-comfort and efficiency.

We make both standard and special leaf springs. What are your requirements?

TUTHILL SPRING CO. 760 W. POLK ST. CHICAGO 7

MOOG INDUSTRIES, INC.
ST. LOUIS, MO.

Originators and Manufacturers of
FLEXIBLE
HOSE ASSEMBLIES
for
Gasoline, Oil, Air, Water, Freon Gas, Carbon Dioxide and for both high and low pressure hydraulic lines
FLEX-O-TUBE COMPANY
Lafayette at 14th Ave., Detroit 14, Michigan

CCJ NEWSCAST

(CONTINUED FROM PAGE 366)

try that any "CC" priorities would be held to the dealer level to prevent any distortion in production of any particular truck type.

The one million unit truck rate in 1946 was the estimate of members of the Motor Truck Industry Advisory Committee at a recent meeting attended by 21 manufacturers, representing more than 75 per cent of truck production and 40 per cent of the truck producing companies.

The 1945 truck production (civilian and military) totalled 668,806 units.

Only 85,000 trucks were manufactured in the first two months of 1946. Despite this poor start, industry estimated a 75,000 unit rate from April through June and a 125,000 monthly rate for the balance of the year. This estimate is based on the expectation of a greater supply of parts and materials.

Even this relatively large number of trucks must be parcelled out equitably to meet large trucking needs, CPA and industry agreed.

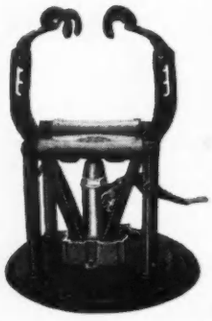
(TURN TO PAGE 370, PLEASE)

Available Trucks
1½ TO 20 TONS
TRUCKS · TRACTORS
TRAILERS · BUSES
(SINCE 1910)
TELEPHONE—BRUNSWICK 1100
AVAILABLE TRUCK CO.
2581 ELSTON AVE.—CHICAGO 47, ILL.

NEW LOW COST
DRILL GRINDER
Anyone can do expert drill grinding with this simple-to-use drill grinding attachment—fits on any bench grinder—saves buying new twist drills—saves time and materials that dull bits waste. Grinds bits from 3/16 to 1¼.
WRITE for FREE literature.

T & H MFG. CO.
811-N East 31st K. C., Mo.

ANNOUNCING an improved Heavy Duty Hydraulic

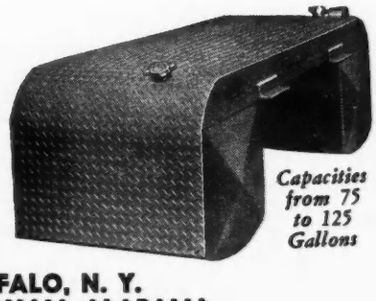


STACKHOUSE TIRE SPREADER
Quicker operation and perfect control is assured by use of the hydraulic foot pedal which develops 6000 lbs. pressure at all times. The strongly constructed tongs grip the walls of the tire securely, the hydraulic forces the tire up and the tongs spread the tire sixteen inches from bead to bead.
As spreader arms come up around the outside walls of tire, complete removal or replacement of tubes are made in one operation. The tire can then be revolved on the rollers. Takes up little space—the base is 22 inches. Accommodates all passenger and truck tires up to 1600-24.
Call your jobber or wire us direct.
E. H. STACKHOUSE
219 North 63rd St., Philadelphia 39, Pa.

FRINK
SNO-PLOWS
REG. U.S. PAT. OFF.
Both "V" TYPE and ONE WAY BLADE TYPE
hand or power hydraulic control
FOR ALL MOTOR TRUCKS FROM 1½ to 10 TONS
Write for catalog 38AC and 38BC with discount to truck dealers.
CARL H. FRINK, Mfr., CLAYTON, 1000 Isl., N. Y.
DAVENPORT-BESLER CORP., DAVENPORT, IOWA
FRINK SNO-PLOWS OF CAN. Ltd., TORONTO, ONT.

Capacities from 28 to 50 gallons

EVERY GOOD TRACTOR OR TRUCK DESERVES A *Snyder*
SAFETY TANK
+ ADD SAFETY, CAPACITY, DURABILITY
— SUBTRACT FIRE HAZARD, OPERATING COST
= ANSWER THE SNYDER SADDLE AND CYLINDER SAFETY TANKS, THE LAST WORD IN TRUCK AND TRACTOR FUEL TANK CONSTRUCTION



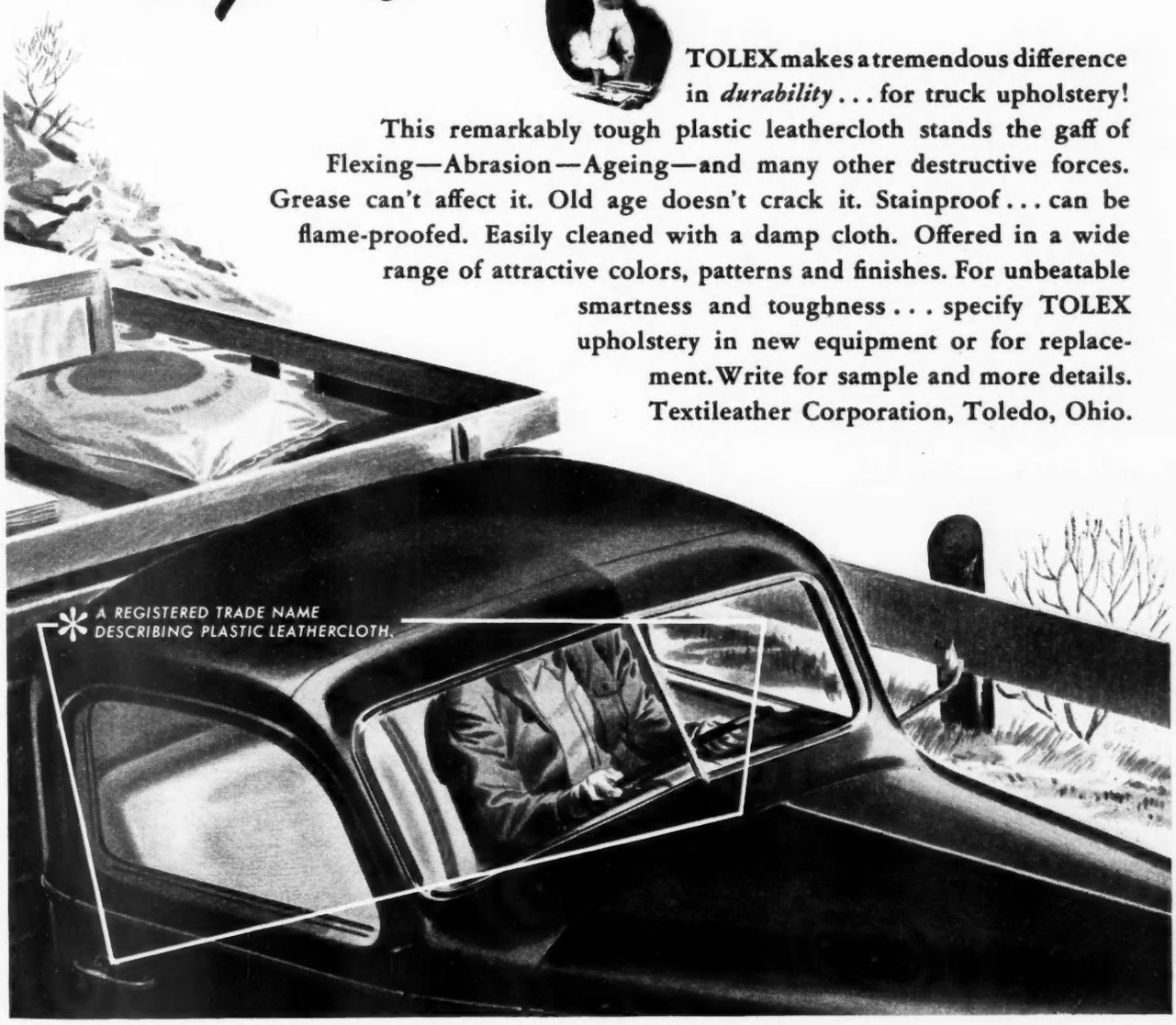
Capacities from 75 to 125 Gallons

SNYDER MANUFACTURING CO., P. O. BOX 14, BUFFALO, N. Y.
SNYDER TANK CORPORATION, P. O. BOX 2390, BIRMINGHAM, ALABAMA

More Mileage For Your Upholstery!

Specify TOLEX*

TOLEX makes a tremendous difference in *durability*... for truck upholstery! This remarkably tough plastic leathercloth stands the gaff of Flexing—Abrasion—Ageing—and many other destructive forces. Grease can't affect it. Old age doesn't crack it. Stainproof... can be flame-proofed. Easily cleaned with a damp cloth. Offered in a wide range of attractive colors, patterns and finishes. For unbeatable smartness and toughness... specify TOLEX upholstery in new equipment or for replacement. Write for sample and more details. Textileather Corporation, Toledo, Ohio.



* A REGISTERED TRADE NAME DESCRIBING PLASTIC LEATHERCLOTH.

TRUCK ENGINEERING TRAILERS

SEMI-TRAILER FLATS — DUMPS — VANS
POLE TRAILERS — MACHINERY TRAILERS

TRUCK ENGINEERING CORPORATION
CLEVELAND, OHIO

THREE WAY CLEANING MAKES FLEET MAINTENANCE EASY

KELITE PROTEXOL—for fast, thorough degreasing of motors and chassis.

KELITE KDL No. 24—for quick, efficient, trouble-free steam cleaning.

KELITE Formula 9—for body cleaning—easy to use—safe on paint.

Let the Kelite Service Engineer acquaint you with the advantages of these simplified operations. His services are free. For further information, call your local Kelite office or write direct to:

KELITE PRODUCTS, Inc.
P. O. Box 2917 Terminal Annex Station
Los Angeles 54, California

Specify
Velvetouch
BIMETALLIC FRICTION MATERIAL
for
CLUTCHES AND BRAKES
THE S. K. WELLMAN CO.
CLEVELAND, OHIO

CCJ NEWSCAST

(CONTINUED FROM PAGE 368)

ANNOUNCES CHICAGO AUTO SHOW

Following a three-day conference of trade association managers, motor car dealers of Detroit, St. Louis, Dallas, Los Angeles and San Francisco have pledged support for Chicago's Automobile Show which will open in late October or early November after a five-year suspension. Announcement of the revival was made by Edward Cleary, director of the Chicago association. Mr. Cleary promised the biggest of all Chicago shows, regardless of auto production or the fact that dealers can't possibly fill the 1946 orders.

100,000 FORDS FOR MAY

Production of cars and trucks by the Ford Motor Co. since last July 3 has passed the 200,000 mark. This total is made up of 102,114 automobiles and 99,715 trucks. J. R. Davis, director of sales and advertising, has forecast Ford production of 100,000 units in May if there is no halt in output.

(TURN TO PAGE 372, PLEASE)

Dart Trucks

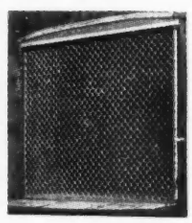
HEAVY DUTY FOR OFF THE HIGHWAY SERVICE

— Specially Designed for —
Coal Mining—Iron Ore Mining—Copper Mining—Pit and Quarry—Logging—Oil Fields—Etc.
It Costs No More for Trucks Specially Built to Fit Your Needs. Have Our Engineers Visit and Analyze Your Operation.

DART TRUCK COMPANY
KANSAS CITY, MO.

WHAT DOES ENGINEERED AND IDENTIFIED MEAN?
IT MEANS WOHLERT PARTS ARE MADE WITH SKILL AND THE PACKAGES ARE EASY TO READ
Wohlert CORPORATION
LANSING 5 MICHIGAN

ZEHR
COLLAPSIBLE TRUCK BACKS



Safe . . . easy and simple to handle. Zehr Truck Backs are all-welded steel designed for great strength and long continuous service.
They are theft-proof, rust-proof and flexible.

Write for details and prices.

ZEHR PRODUCTS COMPANY
2150 East Hazzard Street, Philadelphia 25, Pa.

KINNEAR ROLLING DOORS

For truck bodies as well as buildings. Rugged, dependable. Steel slat curtain coils up quickly, out of the way. Built any size. Motor operation, if desired. Write for details.

The Kinnear Mfg. Co.
2100-20 Fields Ave.
Columbus 16, Ohio

The VISCO-METER
VITALLY IMPORTANT TO ENGINE LUBRICATION

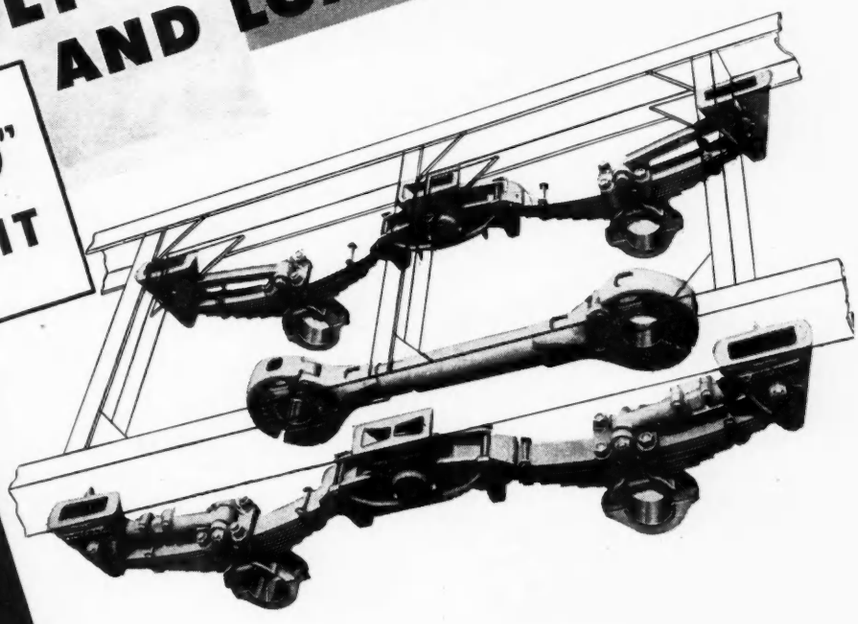
Faulty lubrication is the major cause of engine deterioration . . . contributes to power losses, wastes fuel. Let your drivers *see* the lubricating quality of crankcase oil *at all times* when the engine is running, thereby enabling him to constantly maintain correct lubrication . . . Keep equipment in service and reduce maintenance costs.

The Visco-Meter is an inexpensive, self-amortizing device installed on the engine with an automatic "reporting" gauge on the dash. A "must" for better fleet operation. Write without obligation for full Visco-Meter story to:

VISCO-METER CORPORATION • Buffalo, N. Y.

STOP COSTLY WHEEL BOUNCE AND LOAD TRANSFER

"STANDARD" TANDEM UNIT



8 years of distinguished service

Wire, write or telephone our Engineering Department for complete engineering data

MANUFACTURED BY

Standard Forge & Axle Company

MONTGOMERY 2, ALABAMA

AXLES BRAKES FORGINGS TRAILER PARTS

UNDER LICENSE FROM UTILITY TRAILER MFG. CO., LOS ANGELES, CALIF.

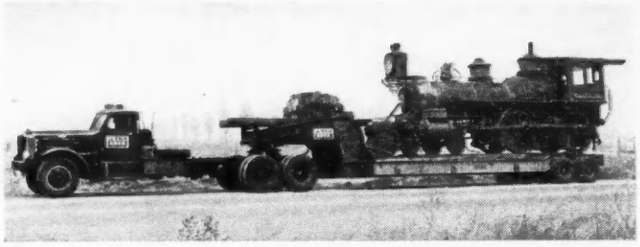
Sterling Motor Trucks

ARE ENGINEERED FOR THE JOB

Economical, dependable models for highway transportation.

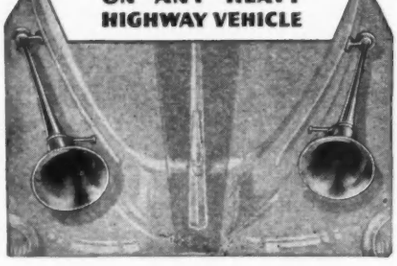
Rugged heavy duty models for hauling heavy machinery, mining, excavating, quarrying, logging, etc.

The only American motor truck with a shock absorbing woodlined frame.



STERLING MOTORS CORPORATION
MILWAUKEE 1, WIS.
Branches and Dealers in Principal Cities

A BUELL AIR HORN
is worth $100 yearly
ON ANY HEAVY HIGHWAY VEHICLE



- **BUELL High Pressure Air Horns Speed Up Schedules and Cut Down Costs!**
- **They get instant response . . . reduce maintenance costs by decreasing unnecessary stops, starts and slow downs.**
- **They keep the Highways open so that a steady cruising speed is maintained . . . 12% better road time is the result!**

TRUCK OPERATORS: BUELL High Pressure Air Horns are available NOW. Write us for information and catalog sheet.

BUELL MANUFACTURING CO.
2988 Cottage Grove Ave., Chicago 16

UNITS AVAILABLE

GRICO

2-AXLE DRIVE

19842 W. Eight Mile Rd.
Detroit 19, Michigan

CCJ NEWSCAST

(CONTINUED FROM PAGE 370)

NEW WEATHERIZING FOR FORDS

Phosphate coating, heretofore applied only to Ford fenders, will now be used on bodies of the entire line of Ford and Mercury cars. Equipment for coating all sheet metal body parts of Mercury cars, in addition to fenders, already is operating, while similar equipment for the Ford line currently is being installed by the company.

The phosphate coating process employed by Ford is a combination etch and surface chemical change since some iron is replaced by the formation of metal phosphate. While the resultant roughening is imperceptible to the touch, it serves as an excellent paint bond, according to the company.

TRUCK DRIVEN TO ALASKA

Overland delivery of an FWD truck over the Alcan highway to the Sourdough Express Co. of Fairbanks, Alaska, a distance of 5600 miles from the factory where it was manufactured is reported by Glenn Carrington & Co., of Seattle, Wash., distributors of industrial and mining machinery in Alaska.

The FWD, a three-ton model, was delivered to Eugene Rogge, manager of the Sourdough Express, at the factory of The Four Wheel Drive Auto Co., in Clintonville, and was driven by him to Seattle, where it was equipped with a platform type body. Rogge then loaded up with six tons of machinery, and with Arthur Erickson, of Glenn Carrington & Co., acting as relief driver, started the fast six-day trip to Fairbanks.

END

(Please resume your reading on P. 154)

KEEP OIL CLEAN WITH PUROLATOR
THE OIL FILTER

PUROLATOR PRODUCTS, INC.
Newark 2, N. J.
Founder and leader of the oil filter industry

Gear Pullers

GARAGE TOOLS

CARBON SCRAPER
CREEPER CASTERS
BUSHING REMOVERS
REAMERS

Cal-Van
MACHINE PRODUCTS INC.
809 WATER ST., JACKSON, MICH. U.S.A.

★ Write for Catalog

HEAVY DUTY MOTOR TRUCKS
AND
GASOLINE ELECTRIC GENERATING SETS

DUPLEX TRUCK COMPANY
Lansing, Michigan

Oldforge "Quality" Tools

For over 19 years we have made every effort to produce hand tools of the finest possible quality and design for use of the mechanical trades and industry. That we have succeeded is attested by the fact that **OLDFORGE "QUALITY" TOOLS** have become the choice of discriminating skilled mechanics everywhere.

"QUALITY" TOOLS have won this enviable reputation because they can be depended upon to do the job. Their uniform temper and design assures daily uninterrupted service.

Experience for yourself the thrill of using **OLDFORGE "QUALITY" TOOLS.** Their modest cost will surprise and interest you.

See your supplier or write us direct.

QUALITY TOOLS CORP. New Wilmington, Pa.
New York Office: 11 Warren St. • Phone WOrth 3640

DECALCOMANIA TRANSFERS & METAL SIGNS FOR *TRUCKS & TRAILERS*

SKETCHES & DESIGN SUGGESTIONS FOR YOUR APPROVAL

WOLVERINE *Process Co.*
Box 2151 · · Lansing, Michigan